

obtaining the total square area of the wound. Contraction is then estimated by establishing the differences between the initial wound area (day 0) and that of post treatment (day 8). The wound area on day 1 is 64mm², the corresponding size of the dermal punch. Calculations are made using the following formula:

5

$$[\text{Open area on day 8}] - [\text{Open area on day 1}] / [\text{Open area on day 1}]$$

Specimens are fixed in 10% buffered formalin and paraffin embedded blocks are sectioned perpendicular to the wound surface (5mm) and cut using a Reichert-Jung microtome.

10 Routine hematoxylin-eosin (H&E) staining is performed on cross-sections of bisected wounds. Histologic examination of the wounds are used to assess whether the healing process and the morphologic appearance of the repaired skin is altered by treatment with an agonist or antagonist of the invention. This assessment included verification of the presence of cell accumulation, inflammatory cells, capillaries, fibroblasts, re-epithelialization and
15 epidermal maturity (Greenhalgh, D.G. *et al.*, *Am. J. Pathol.* 136:1235 (1990)). A calibrated lens micrometer is used by a blinded observer.

Tissue sections are also stained immunohistochemically with a polyclonal rabbit anti-human keratin antibody using ABC Elite detection system. Human skin is used as a positive tissue control while non-immune IgG is used as a negative control. Keratinocyte growth is
20 determined by evaluating the extent of reepithelialization of the wound using a calibrated lens micrometer.

Proliferating cell nuclear antigen/cyclin (PCNA) in skin specimens is demonstrated by using anti-PCNA antibody (1:50) with an ABC Elite detection system. Human colon cancer served as a positive tissue control and human brain tissue is used as a negative tissue
25 control. Each specimen included a section with omission of the primary antibody and substitution with non-immune mouse IgG. Ranking of these sections is based on the extent of proliferation on a scale of 0-8, the lower side of the scale reflecting slight proliferation to the higher side reflecting intense proliferation.

Experimental data are analyzed using an unpaired t test. A p value of < 0.05 is
30 considered significant.

B. Steroid Impaired Rat Model

The inhibition of wound healing by steroids has been well documented in various *in vitro* and *in vivo* systems (Wahl, Glucocorticoids and Wound healing. In: Anti-Inflammatory Steroid Action: Basic and Clinical Aspects. 280-302 (1989); Wahlet *et al.*, *J. Immunol.* 115: 476-481 (1975); Werb *et al.*, *J. Exp. Med.* 147:1684-1694 (1978)). Glucocorticoids retard wound healing by inhibiting angiogenesis, decreasing vascular permeability (Ebert *et al.*, *An. Intern. Med.* 37:701-705 (1952)), fibroblast proliferation, and collagen synthesis (Beck *et al.*, *Growth Factors.* 5: 295-304 (1991); Haynes *et al.*, *J. Clin. Invest.* 61: 703-797 (1978)) and producing a transient reduction of circulating monocytes (Haynes *et al.*, *J. Clin. Invest.* 61: 703-797 (1978); Wahl, "Glucocorticoids and wound healing", In: Antiinflammatory Steroid Action: Basic and Clinical Aspects, Academic Press, New York, pp. 280-302 (1989)). The systemic administration of steroids to impaired wound healing is a well establish phenomenon in rats (Beck *et al.*, *Growth Factors.* 5: 295-304 (1991); Haynes *et al.*, *J. Clin. Invest.* 61: 703-797 (1978); Wahl, "Glucocorticoids and wound healing", In: Antiinflammatory Steroid Action: Basic and Clinical Aspects, Academic Press, New York, pp. 280-302 (1989); Pierce *et al.*, *Proc. Natl. Acad. Sci. USA* 86: 2229-2233 (1989)).

To demonstrate that an agonist or antagonist of the invention can accelerate the healing process, the effects of multiple topical applications of the agonist or antagonist on full thickness excisional skin wounds in rats in which healing has been impaired by the systemic administration of methylprednisolone is assessed.

Young adult male Sprague Dawley rats weighing 250-300 g (Charles River Laboratories) are used in this example. The animals are purchased at 8 weeks of age and are 9 weeks old at the beginning of the study. The healing response of rats is impaired by the systemic administration of methylprednisolone (17mg/kg/rat intramuscularly) at the time of wounding. Animals are individually housed and received food and water *ad libitum*. All manipulations are performed using aseptic techniques. This study is conducted according to the rules and guidelines of Human Genome Sciences, Inc. Institutional Animal Care and Use Committee and the Guidelines for the Care and Use of Laboratory Animals.

The wounding protocol is followed according to section A, above. On the day of wounding, animals are anesthetized with an intramuscular injection of ketamine (50 mg/kg) and xylazine (5 mg/kg). The dorsal region of the animal is shaved and the skin washed with 70% ethanol and iodine solutions. The surgical area is dried with sterile gauze prior to wounding. An 8 mm full-thickness wound is created using a Keyes tissue punch. The

wounds are left open for the duration of the experiment. Applications of the testing materials are given topically once a day for 7 consecutive days commencing on the day of wounding and subsequent to methylprednisolone administration. Prior to treatment, wounds are gently cleansed with sterile saline and gauze sponges.

5 Wounds are visually examined and photographed at a fixed distance at the day of wounding and at the end of treatment. Wound closure is determined by daily measurement on days 1-5 and on day 8. Wounds are measured horizontally and vertically using a calibrated Jameson caliper. Wounds are considered healed if granulation tissue is no longer visible and the wound is covered by a continuous epithelium.

10 The agonist or antagonist of the invention is administered using at a range different doses, from 4mg to 500mg per wound per day for 8 days in vehicle. Vehicle control groups received 50mL of vehicle solution.

 Animals are euthanized on day 8 with an intraperitoneal injection of sodium pentobarbital (300mg/kg). The wounds and surrounding skin are then harvested for
15 histology. Tissue specimens are placed in 10% neutral buffered formalin in tissue cassettes between biopsy sponges for further processing.

 Four groups of 10 animals each (5 with methylprednisolone and 5 without glucocorticoid) are evaluated: 1) Untreated group 2) Vehicle placebo control 3) treated groups.

20 Wound closure is analyzed by measuring the area in the vertical and horizontal axis and obtaining the total area of the wound. Closure is then estimated by establishing the differences between the initial wound area (day 0) and that of post treatment (day 8). The wound area on day 1 is 64mm², the corresponding size of the dermal punch. Calculations are made using the following formula:

25

$$[\text{Open area on day 8}] - [\text{Open area on day 1}] / [\text{Open area on day 1}]$$

Specimens are fixed in 10% buffered formalin and paraffin embedded blocks are sectioned perpendicular to the wound surface (5mm) and cut using an Olympus microtome. Routine
30 hematoxylin-eosin (H&E) staining is performed on cross-sections of bisected wounds. Histologic examination of the wounds allows assessment of whether the healing process and the morphologic appearance of the repaired skin is improved by treatment with an agonist or

antagonist of the invention. A calibrated lens micrometer is used by a blinded observer to determine the distance of the wound gap.

Experimental data are analyzed using an unpaired t test. A p value of < 0.05 is considered significant.

5 The studies described in this example tested activity of agonists or antagonists of the invention. However, one skilled in the art could easily modify the exemplified studies to test the activity of polynucleotides or polypeptides of the invention (e.g., gene therapy).

Example 29: Lymphadema Animal Model

10

The purpose of this experimental approach is to create an appropriate and consistent lymphedema model for testing the therapeutic effects of an agonist or antagonist of the invention in lymphangiogenesis and re-establishment of the lymphatic circulatory system in the rat hind limb. Effectiveness is measured by swelling volume of the affected limb, quantification of the amount of lymphatic vasculature, total blood plasma protein, and histopathology. Acute lymphedema is observed for 7-10 days. Perhaps more importantly, the chronic progress of the edema is followed for up to 3-4 weeks.

Prior to beginning surgery, blood sample is drawn for protein concentration analysis. Male rats weighing approximately ~350g are dosed with Pentobarbital. Subsequently, the right legs are shaved from knee to hip. The shaved area is swabbed with gauze soaked in 70% EtOH. Blood is drawn for serum total protein testing. Circumference and volumetric measurements are made prior to injecting dye into paws after marking 2 measurement levels (0.5 cm above heel, at mid-pt of dorsal paw). The intradermal dorsum of both right and left paws are injected with 0.05 ml of 1% Evan's Blue. Circumference and volumetric measurements are then made following injection of dye into paws.

Using the knee joint as a landmark, a mid-leg inguinal incision is made circumferentially allowing the femoral vessels to be located. Forceps and hemostats are used to dissect and separate the skin flaps. After locating the femoral vessels, the lymphatic vessel that runs along side and underneath the vessel(s) is located. The main lymphatic vessels in this area are then electrically coagulated or suture ligated.

Using a microscope, muscles in back of the leg (near the semitendinosus and adductors) are bluntly dissected. The popliteal lymph node is then located. The 2 proximal

and 2 distal lymphatic vessels and distal blood supply of the popliteal node are then and ligated by suturing. The popliteal lymph node, and any accompanying adipose tissue, is then removed by cutting connective tissues.

Care is taken to control any mild bleeding resulting from this procedure. After
5 lymphatics are occluded, the skin flaps are sealed by using liquid skin (Vetbond) (AJ Buck). The separated skin edges are sealed to the underlying muscle tissue while leaving a gap of ~0.5 cm around the leg. Skin also may be anchored by suturing to underlying muscle when necessary.

To avoid infection, animals are housed individually with mesh (no bedding).
10 Recovering animals are checked daily through the optimal edematous peak, which typically occurred by day 5-7. The plateau edematous peak are then observed. To evaluate the intensity of the lymphedema, the circumference and volumes of 2 designated places on each paw before operation and daily for 7 days are measured. The effect plasma proteins on lymphedema is determined and whether protein analysis is a useful testing perimeter is also
15 investigated. The weights of both control and edematous limbs are evaluated at 2 places. Analysis is performed in a blind manner.

Circumference Measurements: Under brief gas anesthetic to prevent limb movement, a cloth tape is used to measure limb circumference. Measurements are done at the ankle bone and dorsal paw by 2 different people then those 2 readings are averaged. Readings are
20 taken from both control and edematous limbs.

Volumetric Measurements: On the day of surgery, animals are anesthetized with Pentobarbital and are tested prior to surgery. For daily volumetrics animals are under brief halothane anesthetic (rapid immobilization and quick recovery), both legs are shaved and equally marked using waterproof marker on legs. Legs are first dipped in water, then dipped
25 into instrument to each marked level then measured by Buxco edema software(Chen/Victor). Data is recorded by one person, while the other is dipping the limb to marked area.

Blood-plasma protein measurements: Blood is drawn, spun, and serum separated prior to surgery and then at conclusion for total protein and Ca²⁺ comparison.

Limb Weight Comparison: After drawing blood, the animal is prepared for tissue
30 collection. The limbs are amputated using a quillitine, then both experimental and control legs are cut at the ligature and weighed. A second weighing is done as the tibio-cacaneal joint is disarticulated and the foot is weighed.

Histological Preparations: The transverse muscle located behind the knee (popliteal) area is dissected and arranged in a metal mold, filled with freezeGel, dipped into cold methylbutane, placed into labeled sample bags at - 80EC until sectioning. Upon sectioning, the muscle is observed under fluorescent microscopy for lymphatics..

- 5 The studies described in this example tested activity of agonists or antagonists of the invention. However, one skilled in the art could easily modify the exemplified studies to test the activity of polynucleotides or polypeptides of the invention (e.g., gene therapy).

10 *Example 30: Suppression of TNF alpha-induced adhesion molecule expression by a Agonist or Antagonist of the Invention*

The recruitment of lymphocytes to areas of inflammation and angiogenesis involves specific receptor-ligand interactions between cell surface adhesion molecules (CAMs) on lymphocytes and the vascular endothelium. The adhesion process, in both normal and
15 pathological settings, follows a multi-step cascade that involves intercellular adhesion molecule-1 (ICAM-1), vascular cell adhesion molecule-1 (VCAM-1), and endothelial leukocyte adhesion molecule-1 (E-selectin) expression on endothelial cells (EC). The expression of these molecules and others on the vascular endothelium determines the efficiency with which leukocytes may adhere to the local vasculature and extravasate into the
20 local tissue during the development of an inflammatory response. The local concentration of cytokines and growth factor participate in the modulation of the expression of these CAMs.

Tumor necrosis factor alpha (TNF-a), a potent proinflammatory cytokine, is a stimulator of all three CAMs on endothelial cells and may be involved in a wide variety of inflammatory responses, often resulting in a pathological outcome.

- 25 The potential of an agonist or antagonist of the invention to mediate a suppression of TNF-a induced CAM expression can be examined. A modified ELISA assay which uses ECs as a solid phase absorbent is employed to measure the amount of CAM expression on TNF-a treated ECs when co-stimulated with a member of the FGF family of proteins.

To perform the experiment, human umbilical vein endothelial cell (HUVEC) cultures
30 are obtained from pooled cord harvests and maintained in growth medium (EGM-2; Clonetics, San Diego, CA) supplemented with 10% FCS and 1% penicillin/streptomycin in a 37 degree C humidified incubator containing 5% CO₂. HUVECs are seeded in 96-well

plates at concentrations of 1×10^4 cells/well in EGM medium at 37 degree C for 18-24 hrs or until confluent. The monolayers are subsequently washed 3 times with a serum-free solution of RPMI-1640 supplemented with 100 U/ml penicillin and 100 mg/ml streptomycin, and treated with a given cytokine and/or growth factor(s) for 24 h at 37 degree C. Following incubation, the cells are then evaluated for CAM expression.

Human Umbilical Vein Endothelial cells (HUVECs) are grown in a standard 96 well plate to confluence. Growth medium is removed from the cells and replaced with 90 ul of 199 Medium (10% FBS). Samples for testing and positive or negative controls are added to the plate in triplicate (in 10 ul volumes). Plates are incubated at 37 degree C for either 5 h (selectin and integrin expression) or 24 h (integrin expression only). Plates are aspirated to remove medium and 100 μ l of 0.1% paraformaldehyde-PBS(with Ca^{++} and Mg^{++}) is added to each well. Plates are held at 4°C for 30 min.

Fixative is then removed from the wells and wells are washed 1X with PBS(+Ca,Mg)+0.5% BSA and drained. Do not allow the wells to dry. Add 10 μ l of diluted primary antibody to the test and control wells. Anti-ICAM-1-Biotin, Anti-VCAM-1-Biotin and Anti-E-selectin-Biotin are used at a concentration of 10 μ g/ml (1:10 dilution of 0.1 mg/ml stock antibody). Cells are incubated at 37°C for 30 min. in a humidified environment. Wells are washed X3 with PBS(+Ca,Mg)+0.5% BSA.

Then add 20 μ l of diluted ExtrAvidin-Alkaline Phosphatase (1:5,000 dilution) to each well and incubated at 37°C for 30 min. Wells are washed X3 with PBS(+Ca,Mg)+0.5% BSA. 1 tablet of p-Nitrophenol Phosphate pNPP is dissolved in 5 ml of glycine buffer (pH 10.4). 100 μ l of pNPP substrate in glycine buffer is added to each test well. Standard wells in triplicate are prepared from the working dilution of the ExtrAvidin-Alkaline Phosphatase in glycine buffer: $1:5,000 (10^0) > 10^{-0.5} > 10^{-1} > 10^{-1.5}$. 5 μ l of each dilution is added to triplicate wells and the resulting AP content in each well is 5.50 ng, 1.74 ng, 0.55 ng, 0.18 ng. 100 μ l of pNPP reagent must then be added to each of the standard wells. The plate must be incubated at 37°C for 4h. A volume of 50 μ l of 3M NaOH is added to all wells. The results are quantified on a plate reader at 405 nm. The background subtraction option is used on blank wells filled with glycine buffer only. The template is set up to indicate the concentration of AP-conjugate in each standard well [5.50 ng; 1.74 ng; 0.55 ng; 0.18 ng]. Results are indicated as amount of bound AP-conjugate in each sample.

The studies described in this example tested activity of agonists or antagonists of the

invention. However, one skilled in the art could easily modify the exemplified studies to test the activity of polynucleotides or polypeptides of the invention (e.g., gene therapy).

Example 31: Production Of Polypeptide of the Invention For High-Throughput Screening Assays

The following protocol produces a supernatant containing polypeptide of the present invention to be tested. This supernatant can then be used in the Screening Assays described in Examples 33-42.

First, dilute Poly-D-Lysine (644 587 Boehringer-Mannheim) stock solution (1mg/ml in PBS) 1:20 in PBS (w/o calcium or magnesium 17-516F Biowhittaker) for a working solution of 50ug/ml. Add 200 ul of this solution to each well (24 well plates) and incubate at RT for 20 minutes. Be sure to distribute the solution over each well (note: a 12-channel pipetter may be used with tips on every other channel). Aspirate off the Poly-D-Lysine solution and rinse with 1ml PBS (Phosphate Buffered Saline). The PBS should remain in the well until just prior to plating the cells and plates may be poly-lysine coated in advance for up to two weeks.

Plate 293T cells (do not carry cells past P+20) at 2×10^5 cells/well in .5ml DMEM(Dulbecco's Modified Eagle Medium)(with 4.5 G/L glucose and L-glutamine (12-604F Biowhittaker))/10% heat inactivated FBS(14-503F Biowhittaker)/1x Penstrep(17-602E Biowhittaker). Let the cells grow overnight.

The next day, mix together in a sterile solution basin: 300 ul Lipofectamine (18324-012 Gibco/BRL) and 5ml Optimem I (31985070 Gibco/BRL)/96-well plate. With a small volume multi-channel pipetter, aliquot approximately 2ug of an expression vector containing a polynucleotide insert, produced by the methods described in Examples 8-10, into an appropriately labeled 96-well round bottom plate. With a multi-channel pipetter, add 50ul of the Lipofectamine/Optimem I mixture to each well. Pipette up and down gently to mix. Incubate at RT 15-45 minutes. After about 20 minutes, use a multi-channel pipetter to add 150ul Optimem I to each well. As a control, one plate of vector DNA lacking an insert should be transfected with each set of transfections.

Preferably, the transfection should be performed by tag-teaming the following tasks. By tag-teaming, hands on time is cut in half, and the cells do not spend too much time on

PBS. First, person A aspirates off the media from four 24-well plates of cells, and then person B rinses each well with .5-1ml PBS. Person A then aspirates off PBS rinse, and person B, using a 12-channel pipetter with tips on every other channel, adds the 200ul of DNA/Lipofectamine/Optimem 1 complex to the odd wells first, then to the even wells, to each row on the 24-well plates. Incubate at 37 degree C for 6 hours.

While cells are incubating, prepare appropriate media, either 1%BSA in DMEM with 1x penstrep, or HGS CHO-5 media (116.6 mg/L of CaCl₂ (anhyd); 0.00130 mg/L CuSO₄·5H₂O; 0.050 mg/L of Fe(NO₃)₃·9H₂O; 0.417 mg/L of FeSO₄·7H₂O; 311.80 mg/L of KCl; 28.64 mg/L of MgCl₂; 48.84 mg/L of MgSO₄; 6995.50 mg/L of NaCl; 2400.0 mg/L of NaHCO₃; 62.50 mg/L of NaH₂PO₄·H₂O; 71.02 mg/L of Na₂HPO₄; .4320 mg/L of ZnSO₄·7H₂O; .002 mg/L of Arachidonic Acid ; 1.022 mg/L of Cholesterol; .070 mg/L of DL-alpha-Tocopherol-Acetate; 0.0520 mg/L of Linoleic Acid; 0.010 mg/L of Linolenic Acid; 0.010 mg/L of Myristic Acid; 0.010 mg/L of Oleic Acid; 0.010 mg/L of Palmitric Acid; 0.010 mg/L of Palmitic Acid; 100 mg/L of Pluronic F-68; 0.010 mg/L of Stearic Acid; 2.20 mg/L of Tween 80; 4551 mg/L of D-Glucose; 130.85 mg/ml of L- Alanine; 147.50 mg/ml of L-Arginine-HCL; 7.50 mg/ml of L-Asparagine-H₂O; 6.65 mg/ml of L-Aspartic Acid; 29.56 mg/ml of L-Cystine-2HCL-H₂O; 31.29 mg/ml of L-Cystine-2HCL; 7.35 mg/ml of L-Glutamic Acid; 365.0 mg/ml of L-Glutamine; 18.75 mg/ml of Glycine; 52.48 mg/ml of L-Histidine-HCL-H₂O; 106.97 mg/ml of L-Isoleucine; 111.45 mg/ml of L-Leucine; 163.75 mg/ml of L-Lysine HCL; 32.34 mg/ml of L-Methionine; 68.48 mg/ml of L-Phenylalanine; 40.0 mg/ml of L-Proline; 26.25 mg/ml of L-Serine; 101.05 mg/ml of L-Threonine; 19.22 mg/ml of L-Tryptophan; 91.79 mg/ml of L-Tyrosine-2Na-2H₂O; and 99.65 mg/ml of L-Valine; 0.0035 mg/L of Biotin; 3.24 mg/L of D-Ca Pantothenate; 11.78 mg/L of Choline Chloride; 4.65 mg/L of Folic Acid; 15.60 mg/L of i-Inositol; 3.02 mg/L of Niacinamide; 3.00 mg/L of Pyridoxal HCL; 0.031 mg/L of Pyridoxine HCL; 0.319 mg/L of Riboflavin; 3.17 mg/L of Thiamine HCL; 0.365 mg/L of Thymidine; 0.680 mg/L of Vitamin B₁₂; 25 mM of HEPES Buffer; 2.39 mg/L of Na Hypoxanthine; 0.105 mg/L of Lipoic Acid; 0.081 mg/L of Sodium Putrescine-2HCL; 55.0 mg/L of Sodium Pyruvate; 0.0067 mg/L of Sodium Selenite; 20uM of Ethanolamine; 0.122 mg/L of Ferric Citrate; 41.70 mg/L of Methyl-B-Cyclodextrin complexed with Linoleic Acid; 33.33 mg/L of Methyl-B-Cyclodextrin complexed with Oleic Acid; 10 mg/L of Methyl-B-Cyclodextrin complexed with Retinal Acetate. Adjust

osmolarity to 327 mOsm) with 2mm glutamine and 1x penstrep. (BSA (81-068-3 Bayer) 100gm dissolved in 1L DMEM for a 10% BSA stock solution). Filter the media and collect 50 ul for endotoxin assay in 15ml polystyrene conical.

5 The transfection reaction is terminated, preferably by tag-teaming, at the end of the incubation period. Person A aspirates off the transfection media, while person B adds 1.5ml appropriate media to each well. Incubate at 37 degree C for 45 or 72 hours depending on the media used: 1%BSA for 45 hours or CHO-5 for 72 hours.

10 On day four, using a 300ul multichannel pipetter, aliquot 600ul in one 1ml deep well plate and the remaining supernatant into a 2ml deep well. The supernatants from each well can then be used in the assays described in Examples 33-40.

It is specifically understood that when activity is obtained in any of the assays described below using a supernatant, the activity originates from either the polypeptide of the present invention directly (e.g., as a secreted protein) or by polypeptide of the present invention inducing expression of other proteins, which are then secreted into the supernatant.
15 Thus, the invention further provides a method of identifying the protein in the supernatant characterized by an activity in a particular assay.

Example 32: Construction of GAS Reporter Construct

20 One signal transduction pathway involved in the differentiation and proliferation of cells is called the Jaks-STATs pathway. Activated proteins in the Jaks-STATs pathway bind to gamma activation site "GAS" elements or interferon-sensitive responsive element ("ISRE"), located in the promoter of many genes. The binding of a protein to these elements alter the expression of the associated gene.

25 GAS and ISRE elements are recognized by a class of transcription factors called Signal Transducers and Activators of Transcription, or "STATs." There are six members of the STATs family. Stat1 and Stat3 are present in many cell types, as is Stat2 (as response to IFN-alpha is widespread). Stat4 is more restricted and is not in many cell types though it has been found in T helper class I, cells after treatment with IL-12. Stat5 was originally called
30 mammary growth factor, but has been found at higher concentrations in other cells including myeloid cells. It can be activated in tissue culture cells by many cytokines.

The STATs are activated to translocate from the cytoplasm to the nucleus upon

tyrosine phosphorylation by a set of kinases known as the Janus Kinase ("Jaks") family. Jaks represent a distinct family of soluble tyrosine kinases and include Tyk2, Jak1, Jak2, and Jak3. These kinases display significant sequence similarity and are generally catalytically inactive in resting cells.

5 The Jaks are activated by a wide range of receptors summarized in the Table below. (Adapted from review by Schidler and Darnell, *Ann. Rev. Biochem.* 64:621-51 (1995).) A cytokine receptor family, capable of activating Jaks, is divided into two groups: (a) Class 1 includes receptors for IL-2, IL-3, IL-4, IL-6, IL-7, IL-9, IL-11, IL-12, IL-15, Epo, PRL, GH, G-CSF, GM-CSF, LIF, CNTF, and thrombopoietin; and (b) Class 2 includes IFN- α , IFN- γ ,
10 and IL-10. The Class 1 receptors share a conserved cysteine motif (a set of four conserved cysteines and one tryptophan) and a WSXWS motif (a membrane proximal region encoding Trp-Ser-Xxx-Trp-Ser (SEQ ID NO:1686)).

 Thus, on binding of a ligand to a receptor, Jaks are activated, which in turn activate STATs, which then translocate and bind to GAS elements. This entire process is
15 encompassed in the Jaks-STATs signal transduction pathway.

 Therefore, activation of the Jaks-STATs pathway, reflected by the binding of the GAS or the ISRE element, can be used to indicate proteins involved in the proliferation and differentiation of cells. For example, growth factors and cytokines are known to activate the Jaks-STATs pathway. (See Table below.) Thus, by using GAS elements linked to reporter
20 molecules, activators of the Jaks-STATs pathway can be identified.

	<u>Ligand</u>	<u>JAKs</u>				<u>STATs GAS(elements) or ISRE</u>	
		<u>tyk2</u>	<u>Jak1</u>	<u>Jak2</u>	<u>Jak3</u>		
	<u>IFN family</u>						
5	IFN-a/B	+	+	-	-	1,2,3	ISRE
	IFN-g		+	+	-	1	GAS
	(IRF1>Lys6>IFP)						
	IL-10	+	?	?	-	1,3	
10	<u>gp130 family</u>						
	IL-6 (Pleiotrohic)	+	+	+	?	1,3	GAS
	(IRF1>Lys6>IFP)						
	IL-11 (Pleiotrohic)	?	+	?	?	1,3	
	OnM(Pleiotrohic)	?	+	+	?	1,3	
15	LIF(Pleiotrohic)	?	+	+	?	1,3	
	CNTF(Pleiotrohic)	-/+	+	+	?	1,3	
	G-CSF(Pleiotrohic)	?	+	?	?	1,3	
	IL-12(Pleiotrohic)	+	-	+	+	1,3	
20	<u>g-C family</u>						
	IL-2 (lymphocytes)	-	+	-	+	1,3,5	GAS
	IL-4 (lymph/myeloid)	-	+	-	+	6	GAS (IRF1 = IFP
	>>Ly6)(IgH)						
	IL-7 (lymphocytes)	-	+	-	+	5	GAS
25	IL-9 (lymphocytes)	-	+	-	+	5	GAS
	IL-13 (lymphocyte)	-	+	?	?	6	GAS
	IL-15	?	+	?	+	5	GAS
	<u>gp140 family</u>						
30	IL-3 (myeloid)	-	-	+	-	5	GAS
	(IRF1>IFP>>Ly6)						
	IL-5 (myeloid)	-	-	+	-	5	GAS
	GM-CSF (myeloid)	-	-	+	-	5	GAS

510

Growth hormone family

	GH	?	-	+	-	5	
	PRL	?	+/-	+	-	1,3,5	
5	EPO	?	-	+	-	5	GAS(B-
	CAS>IRF1=IFP>>Ly6)						

Receptor Tyrosine Kinases

	EGF	?	+	+	-	1,3	GAS (IRF1)
10	PDGF	?	+	+	-	1,3	
	CSF-1	?	+	+	-	1,3	GAS (not IRF1)

To construct a synthetic GAS containing promoter element, which is used in the Biological Assays described in Examples 33-34, a PCR based strategy is employed to generate a GAS-SV40 promoter sequence. The 5' primer contains four tandem copies of the GAS binding site found in the IRF1 promoter and previously demonstrated to bind STATs upon induction with a range of cytokines (Rothman et al., *Immunity* 1:457-468 (1994).), although other GAS or ISRE elements can be used instead. The 5' primer also contains 18bp of sequence complementary to the SV40 early promoter sequence and is flanked with an XhoI site. The sequence of the 5' primer is:

10 5':GCGCCTCGAGATTTCCTCCGAAATCTAGATTTCCTCCGAAATGATTTCCTCCGAAATGATTTCCTCCGAAATATCTGCCATCTCAATTAG:3' (SEQ ID NO:1687)

The downstream primer is complementary to the SV40 promoter and is flanked with a Hind III site: 5':GCGGCAAGCTTTTGTCAAAGCCTAGGC:3' (SEQ ID NO:1688)

15 PCR amplification is performed using the SV40 promoter template present in the B-gal:promoter plasmid obtained from Clontech. The resulting PCR fragment is digested with XhoI/Hind III and subcloned into BLSK2-. (Stratagene.) Sequencing with forward and reverse primers confirms that the insert contains the following sequence:

20 5':CTCGAGATTTCCTCCGAAATCTAGATTTCCTCCGAAATGATTTCCTCCGAAATGATTTCCTCCGAAATATCTGCCATCTCAATTAGTCAGCAACCATAGTCCCGCCCCTAACTCCGCCCATCCCGCCCCTAACTCCGCCCAGTTCCGCCCATTCTCCGCCCCATGGCTGACTAATTTTTTTTATTTATGCAGAGGCCGAGGCCGCCTCGGCCTCTGAGCTATTCCAGAAGTAGTGAGGAGGCTTTTTTGGAGGCCTA
25 GGCTTTTGCAAAAGCTT:3' (SEQ ID NO:1689)

With this GAS promoter element linked to the SV40 promoter, a GAS:SEAP2 reporter construct is next engineered. Here, the reporter molecule is a secreted alkaline phosphatase, or "SEAP." Clearly, however, any reporter molecule can be instead of SEAP, in this or in any of the other Examples. Well known reporter molecules that can be used instead of SEAP include chloramphenicol

acetyltransferase (CAT), luciferase, alkaline phosphatase, B-galactosidase, green fluorescent protein (GFP), or any protein detectable by an antibody.

The above sequence confirmed synthetic GAS-SV40 promoter element is subcloned into the pSEAP-Promoter vector obtained from Clontech using HindIII and XhoI, effectively replacing the SV40 promoter with the amplified GAS:SV40 promoter element, to create the GAS-SEAP vector. However, this vector does not contain a neomycin resistance gene, and therefore, is not preferred for mammalian expression systems.

Thus, in order to generate mammalian stable cell lines expressing the GAS-SEAP reporter, the GAS-SEAP cassette is removed from the GAS-SEAP vector using SalI and NotI, and inserted into a backbone vector containing the neomycin resistance gene, such as pGFP-1 (Clontech), using these restriction sites in the multiple cloning site, to create the GAS-SEAP/Neo vector. Once this vector is transfected into mammalian cells, this vector can then be used as a reporter molecule for GAS binding as described in Examples 33-34.

Other constructs can be made using the above description and replacing GAS with a different promoter sequence. For example, construction of reporter molecules containing NFK-B and EGR promoter sequences are described in Examples 35 and 36. However, many other promoters can be substituted using the protocols described in these Examples. For instance, SRE, IL-2, NFAT, or Osteocalcin promoters can be substituted, alone or in combination (e.g., GAS/NF-KB/EGR, GAS/NF-KB, IL-2/NFAT, or NF-KB/GAS). Similarly, other cell lines can be used to test reporter construct activity, such as HELA (epithelial), HUVEC (endothelial), Reh (B-cell), Saos-2 (osteoblast), HUVAC (aortic), or Cardiomyocyte.

Example 33: High-Throughput Screening Assay for T-cell Activity.

The following protocol is used to assess T-cell activity by identifying factors, and determining whether supernate containing a polypeptide of the invention proliferates and/or differentiates T-cells. T-cell activity is assessed using the

GAS/SEAP/Neo construct produced in Example 32. Thus, factors that increase SEAP activity indicate the ability to activate the Jaks-STATS signal transduction pathway. The T-cell used in this assay is Jurkat T-cells (ATCC Accession No. TIB-152), although Molt-3 cells (ATCC Accession No. CRL-1552) and Molt-4 cells (ATCC
5 Accession No. CRL-1582) cells can also be used.

Jurkat T-cells are lymphoblastic CD4+ Th1 helper cells. In order to generate stable cell lines, approximately 2 million Jurkat cells are transfected with the GAS-SEAP/neo vector using DMRIE-C (Life Technologies)(transfection procedure described below). The transfected cells are seeded to a density of approximately
10 20,000 cells per well and transfectants resistant to 1 mg/ml gentamicin selected. Resistant colonies are expanded and then tested for their response to increasing concentrations of interferon gamma. The dose response of a selected clone is demonstrated.

Specifically, the following protocol will yield sufficient cells for 75 wells
15 containing 200 ul of cells. Thus, it is either scaled up, or performed in multiple to generate sufficient cells for multiple 96 well plates. Jurkat cells are maintained in RPMI + 10% serum with 1% Pen-Strep. Combine 2.5 mls of OPTI-MEM (Life Technologies) with 10 ug of plasmid DNA in a T25 flask. Add 2.5 ml OPTI-MEM containing 50 ul of DMRIE-C and incubate at room temperature for 15-45 mins.

20 During the incubation period, count cell concentration, spin down the required number of cells (10^7 per transfection), and resuspend in OPTI-MEM to a final concentration of 10^7 cells/ml. Then add 1ml of 1×10^7 cells in OPTI-MEM to T25 flask and incubate at 37 degree C for 6 hrs. After the incubation, add 10 ml of RPMI + 15% serum.

25 The Jurkat:GAS-SEAP stable reporter lines are maintained in RPMI + 10% serum, 1 mg/ml Gentamicin, and 1% Pen-Strep. These cells are treated with supernatants containing polypeptide of the present invention or polypeptide of the present invention induced polypeptides as produced by the protocol described in Example 31.

30 On the day of treatment with the supernatant, the cells should be washed and

resuspended in fresh RPMI + 10% serum to a density of 500,000 cells per ml. The exact number of cells required will depend on the number of supernatants being screened. For one 96 well plate, approximately 10 million cells (for 10 plates, 100 million cells) are required.

5 Transfer the cells to a triangular reservoir boat, in order to dispense the cells into a 96 well dish, using a 12 channel pipette. Using a 12 channel pipette, transfer 200 ul of cells into each well (therefore adding 100, 000 cells per well).

 After all the plates have been seeded, 50 ul of the supernatants are transferred directly from the 96 well plate containing the supernatants into each well using a 12
10 channel pipette. In addition, a dose of exogenous interferon gamma (0.1, 1.0, 10 ng) is added to wells H9, H10, and H11 to serve as additional positive controls for the assay.

 The 96 well dishes containing Jurkat cells treated with supernatants are placed in an incubator for 48 hrs (note: this time is variable between 48-72 hrs). 35 ul
15 samples from each well are then transferred to an opaque 96 well plate using a 12 channel pipette. The opaque plates should be covered (using sellophane covers) and stored at -20 degree C until SEAP assays are performed according to Example 37. The plates containing the remaining treated cells are placed at 4 degree C and serve as a source of material for repeating the assay on a specific well if desired.

20 As a positive control, 100 Unit/ml interferon gamma can be used which is known to activate Jurkat T cells. Over 30 fold induction is typically observed in the positive control wells.

 The above protocol may be used in the generation of both transient, as well as, stable transfected cells, which would be apparent to those of skill in the art.

25

Example 34: High-Throughput Screening Assay Identifying Myeloid Activity

 The following protocol is used to assess myeloid activity of polypeptide of the present invention by determining whether polypeptide of the present invention
30 proliferates and/or differentiates myeloid cells. Myeloid cell activity is assessed using

the GAS/SEAP/Neo construct produced in Example 32. Thus, factors that increase SEAP activity indicate the ability to activate the Jaks-STATS signal transduction pathway. The myeloid cell used in this assay is U937, a pre-monocyte cell line, although TF-1, HL60, or KG1 can be used.

- 5 To transiently transfect U937 cells with the GAS/SEAP/Neo construct produced in Example 32, a DEAE-Dextran method (Kharbanda et. al., 1994, Cell Growth & Differentiation, 5:259-265) is used. First, harvest 2×10^7 U937 cells and wash with PBS. The U937 cells are usually grown in RPMI 1640 medium containing 10% heat-inactivated fetal bovine serum (FBS) supplemented with 100 units/ml penicillin and 100 mg/ml streptomycin.

Next, suspend the cells in 1 ml of 20 mM Tris-HCl (pH 7.4) buffer containing 0.5 mg/ml DEAE-Dextran, 8 ug GAS-SEAP2 plasmid DNA, 140 mM NaCl, 5 mM KCl, 375 uM $\text{Na}_2\text{HPO}_4 \cdot 7\text{H}_2\text{O}$, 1 mM MgCl_2 , and 675 uM CaCl_2 . Incubate at 37 degrees C for 45 min.

- 15 Wash the cells with RPMI 1640 medium containing 10% FBS and then resuspend in 10 ml complete medium and incubate at 37 degree C for 36 hr.

The GAS-SEAP/U937 stable cells are obtained by growing the cells in 400 ug/ml G418. The G418-free medium is used for routine growth but every one to two months, the cells should be re-grown in 400 ug/ml G418 for couple of passages.

- 20 These cells are tested by harvesting 1×10^8 cells (this is enough for ten 96-well plates assay) and wash with PBS. Suspend the cells in 200 ml above described growth medium, with a final density of 5×10^5 cells/ml. Plate 200 ul cells per well in the 96-well plate (or 1×10^5 cells/well).

- Add 50 ul of the supernatant prepared by the protocol described in Example 25 31. Incubate at 37 degree C for 48 to 72 hr. As a positive control, 100 Unit/ml interferon gamma can be used which is known to activate U937 cells. Over 30 fold induction is typically observed in the positive control wells. SEAP assay the supernatant according to the protocol described in Example 37.

- 30 *Example 35: High-Throughput Screening Assay Identifying Neuronal Activity.*

When cells undergo differentiation and proliferation, a group of genes are activated through many different signal transduction pathways. One of these genes, EGR1 (early growth response gene 1), is induced in various tissues and cell types upon activation. The promoter of EGR1 is responsible for such induction. Using the EGR1 promoter linked to reporter molecules, activation of cells can be assessed by polypeptide of the present invention.

Particularly, the following protocol is used to assess neuronal activity in PC12 cell lines. PC12 cells (rat phenochromocytoma cells) are known to proliferate and/or differentiate by activation with a number of mitogens, such as TPA (tetradecanoyl phorbol acetate), NGF (nerve growth factor), and EGF (epidermal growth factor). The EGR1 gene expression is activated during this treatment. Thus, by stably transfecting PC12 cells with a construct containing an EGR promoter linked to SEAP reporter, activation of PC12 cells by polypeptide of the present invention can be assessed.

The EGR/SEAP reporter construct can be assembled by the following protocol. The EGR-1 promoter sequence (-633 to +1)(Sakamoto K et al., Oncogene 6:867-871 (1991)) can be PCR amplified from human genomic DNA using the following primers:

5' GCGCTCGAGGGATGACAGCGATAGAACCCCGG -3' (SEQ ID NO: 1690)

5' GCGAAGCTTCGCGACTCCCCGGATCCGCCTC-3' (SEQ ID NO: 1691)

Using the GAS:SEAP/Neo vector produced in Example 32, EGR1 amplified product can then be inserted into this vector. Linearize the GAS:SEAP/Neo vector using restriction enzymes XhoI/HindIII, removing the GAS/SV40 stuffer. Restrict the EGR1 amplified product with these same enzymes. Ligate the vector and the EGR1 promoter.

To prepare 96 well-plates for cell culture, two mls of a coating solution (1:30 dilution of collagen type I (Upstate Biotech Inc. Cat#08-115) in 30% ethanol (filter

sterilized)) is added per one 10 cm plate or 50 ml per well of the 96-well plate, and allowed to air dry for 2 hr.

PC12 cells are routinely grown in RPMI-1640 medium (Bio Whittaker) containing 10% horse serum (JRH BIOSCIENCES, Cat. # 12449-78P), 5% heat-inactivated fetal bovine serum (FBS) supplemented with 100 units/ml penicillin and 100 ug/ml streptomycin on a precoated 10 cm tissue culture dish. One to four split is done every three to four days. Cells are removed from the plates by scraping and resuspended with pipetting up and down for more than 15 times.

Transfect the EGR/SEAP/Neo construct into PC12 using the Lipofectamine protocol described in Example 31. EGR-SEAP/PC12 stable cells are obtained by growing the cells in 300 ug/ml G418. The G418-free medium is used for routine growth but every one to two months, the cells should be re-grown in 300 ug/ml G418 for couple of passages.

To assay for neuronal activity, a 10 cm plate with cells around 70 to 80% confluent is screened by removing the old medium. Wash the cells once with PBS (Phosphate buffered saline). Then starve the cells in low serum medium (RPMI-1640 containing 1% horse serum and 0.5% FBS with antibiotics) overnight.

The next morning, remove the medium and wash the cells with PBS. Scrape off the cells from the plate, suspend the cells well in 2 ml low serum medium. Count the cell number and add more low serum medium to reach final cell density as 5×10^5 cells/ml.

Add 200 ul of the cell suspension to each well of 96-well plate (equivalent to 1×10^5 cells/well). Add 50 ul supernatant produced by Example 31, 37 degree C for 48 to 72 hr. As a positive control, a growth factor known to activate PC12 cells through EGR can be used, such as 50 ng/ul of Neuronal Growth Factor (NGF). Over fifty-fold induction of SEAP is typically seen in the positive control wells. SEAP assay the supernatant according to Example 37.

Example 36: High-Throughput Screening Assay for T-cell Activity

NF-KB (Nuclear Factor KB) is a transcription factor activated by a wide variety of agents including the inflammatory cytokines IL-1 and TNF, CD30 and CD40, lymphotoxin-alpha and lymphotoxin-beta, by exposure to LPS or thrombin, and by expression of certain viral gene products. As a transcription factor, NF-KB
5 regulates the expression of genes involved in immune cell activation, control of apoptosis (NF- KB appears to shield cells from apoptosis), B and T-cell development, anti-viral and antimicrobial responses, and multiple stress responses.

In non-stimulated conditions, NF- KB is retained in the cytoplasm with I-KB (Inhibitor KB). However, upon stimulation, I- KB is phosphorylated and degraded,
10 causing NF- KB to shuttle to the nucleus, thereby activating transcription of target genes. Target genes activated by NF- KB include IL-2, IL-6, GM-CSF, ICAM-1 and class I MHC.

Due to its central role and ability to respond to a range of stimuli, reporter constructs utilizing the NF-KB promoter element are used to screen the supernatants
15 produced in Example 31. Activators or inhibitors of NF-KB would be useful in treating, preventing, and/or diagnosing diseases. For example, inhibitors of NF-KB could be used to treat those diseases related to the acute or chronic activation of NF-KB, such as rheumatoid arthritis.

To construct a vector containing the NF-KB promoter element, a PCR based
20 strategy is employed. The upstream primer contains four tandem copies of the NF-KB binding site (GGGGACTTTCCC) (SEQ ID NO:1692), 18 bp of sequence complementary to the 5' end of the SV40 early promoter sequence, and is flanked with an XhoI site:

5':GCGGCCTCGAGGGGACTTTCCCGGGGACTTTCCGGGGACTTTCCGGGAC
25 TTTCCATCCTGCCATCTCAATTAG:3' (SEQ ID NO:1693)

The downstream primer is complementary to the 3' end of the SV40 promoter and is flanked with a Hind III site:

5':GCGGCAAGCTTTTTGCAAAGCCTAGGC:3' (SEQ ID NO:1688)

PCR amplification is performed using the SV40 promoter template present in
30 the pB-gal:promoter plasmid obtained from Clontech. The resulting PCR fragment is

digested with XhoI and Hind III and subcloned into BLSK2-. (Stratagene) Sequencing with the T7 and T3 primers confirms the insert contains the following sequence:

5':CTCGAGGGGACTTTCCCGGGGACTTTCCGGGGACTTTCCGGGACTTTCC
5 ATCTGCCATCTCAATTAGTCAGCAACCATAGTCCCGCCCCTAACTCCGCCC
ATCCCGCCCCTAACTCCGCCCAGTTCCGCCCATTCTCCGCCCCATGGCTGA
CTAATTTTTTTTTATTTATGCAGAGGCCGAGGCCGCCTCGGCCTCTGAGCTA
TTCCAGAAGTAGTGAGGAGGCTTTTTTGGAGGCCTAGGCTTTTGCAAAA
GCTT:3' (SEQ ID NO:1694)

10 Next, replace the SV40 minimal promoter element present in the pSEAP2-promoter plasmid (Clontech) with this NF-KB/SV40 fragment using XhoI and HindIII. However, this vector does not contain a neomycin resistance gene, and therefore, is not preferred for mammalian expression systems.

15 In order to generate stable mammalian cell lines, the NF-KB/SV40/SEAP cassette is removed from the above NF-KB/SEAP vector using restriction enzymes Sall and NotI, and inserted into a vector containing neomycin resistance. Particularly, the NF-KB/SV40/SEAP cassette was inserted into pGFP-1 (Clontech), replacing the GFP gene, after restricting pGFP-1 with Sall and NotI.

20 Once NF-KB/SV40/SEAP/Neo vector is created, stable Jurkat T-cells are created and maintained according to the protocol described in Example 33. Similarly, the method for assaying supernatants with these stable Jurkat T-cells is also described in Example 33. As a positive control, exogenous TNF alpha (0.1,1, 10 ng) is added to wells H9, H10, and H11, with a 5-10 fold activation typically observed.

25 *Example 37: Assay for SEAP Activity*

30 As a reporter molecule for the assays described in Examples 33-36, SEAP activity is assayed using the Tropix Phospho-light Kit (Cat. BP-400) according to the following general procedure. The Tropix Phospho-light Kit supplies the Dilution, Assay, and Reaction Buffers used below.

Prime a dispenser with the 2.5x Dilution Buffer and dispense 15 ul of 2.5x dilution buffer into Optiplates containing 35 ul of a supernatant. Seal the plates with a plastic sealer and incubate at 65 degree C for 30 min. Separate the Optiplates to avoid uneven heating.

- 5 Cool the samples to room temperature for 15 minutes. Empty the dispenser and prime with the Assay Buffer. Add 50 ml Assay Buffer and incubate at room temperature 5 min. Empty the dispenser and prime with the Reaction Buffer (see the table below).. Add 50 ul Reaction Buffer and incubate at room temperature for 20 minutes. Since the intensity of the chemiluminescent signal is time dependent, and it
- 10 takes about 10 minutes to read 5 plates on luminometer, one should treat 5 plates at each time and start the second set 10 minutes later.

Read the relative light unit in the luminometer. Set H12 as blank, and print the results. An increase in chemiluminescence indicates reporter activity.

15 Reaction Buffer Formulation:

# of plates	Rxn buffer diluent (ml)	CSPD (ml)
10	60	3
11	65	3.25
12	70	3.5
13	75	3.75
14	80	4
15	85	4.25
16	90	4.5
17	95	4.75
18	100	5
19	105	5.25
20	110	5.5
21	115	5.75
22	120	6

521

23	125	6.25
24	130	6.5
25	135	6.75
26	140	7
27	145	7.25
28	150	7.5
29	155	7.75
30	160	8
31	165	8.25
32	170	8.5
33	175	8.75
34	180	9
35	185	9.25
36	190	9.5
37	195	9.75
38	200	10
39	205	10.25
40	210	10.5
41	215	10.75
42	220	11
43	225	11.25
44	230	11.5
45	235	11.75
46	240	12
47	245	12.25
48	250	12.5
49	255	12.75
50	260	13

Example 38: High-Throughput Screening Assay Identifying Changes in Small

Molecule Concentration and Membrane Permeability

Binding of a ligand to a receptor is known to alter intracellular levels of small molecules. such as calcium, potassium, sodium, and pH, as well as alter membrane potential. These alterations can be measured in an assay to identify supernatants which bind to receptors of a particular cell. Although the following protocol describes an assay for calcium, this protocol can easily be modified to detect changes in potassium, sodium, pH, membrane potential, or any other small molecule which is detectable by a fluorescent probe.

The following assay uses Fluorometric Imaging Plate Reader ("FLIPR") to measure changes in fluorescent molecules (Molecular Probes) that bind small molecules. Clearly, any fluorescent molecule detecting a small molecule can be used instead of the calcium fluorescent molecule, fluo-4 (Molecular Probes, Inc.; catalog no. F-14202), used here.

For adherent cells, seed the cells at 10,000 -20,000 cells/well in a Co-star black 96-well plate with clear bottom. The plate is incubated in a CO₂ incubator for 20 hours. The adherent cells are washed two times in Biotek washer with 200 ul of HBSS (Hank's Balanced Salt Solution) leaving 100 ul of buffer after the final wash.

A stock solution of 1 mg/ml fluo-4 is made in 10% pluronic acid DMSO. To load the cells with fluo-4, 50 ul of 12 ug/ml fluo-4 is added to each well. The plate is incubated at 37 degrees C in a CO₂ incubator for 60 min. The plate is washed four times in the Biotek washer with HBSS leaving 100 ul of buffer.

For non-adherent cells, the cells are spun down from culture media. Cells are re-suspended to $2-5 \times 10^6$ cells/ml with HBSS in a 50-ml conical tube. 4 ul of 1 mg/ml fluo-4 solution in 10% pluronic acid DMSO is added to each ml of cell suspension. The tube is then placed in a 37 degrees C water bath for 30-60 min. The cells are washed twice with HBSS, resuspended to 1×10^6 cells/ml, and dispensed into a microplate. 100 ul/well. The plate is centrifuged at 1000 rpm for 5 min. The plate is then washed once in Denley Cell Wash with 200 ul, followed by an aspiration step to 100 ul final volume.

For a non-cell based assay, each well contains a fluorescent molecule, such as fluo-4. The supernatant is added to the well, and a change in fluorescence is detected.

To measure the fluorescence of intracellular calcium, the FLIPR is set for the following parameters: (1) System gain is 300-800 mW; (2) Exposure time is 0.4 second; (3) Camera F/stop is F/2; (4) Excitation is 488 nm; (5) Emission is 530 nm; and (6) Sample addition is 50 ul. Increased emission at 530 nm indicates an extracellular signaling event caused by the a molecule, either polypeptide of the present invention or a molecule induced by polypeptide of the present invention, which has resulted in an increase in the intracellular Ca^{++} concentration.

Example 40: High-Throughput Screening Assay Identifying Tyrosine Kinase Activity

The Protein Tyrosine Kinases (PTK) represent a diverse group of transmembrane and cytoplasmic kinases. Within the Receptor Protein Tyrosine Kinase (RPTK) group are receptors for a range of mitogenic and metabolic growth factors including the PDGF, FGF, EGF, NGF, HGF and Insulin receptor subfamilies. In addition there are a large family of RPTKs for which the corresponding ligand is unknown. Ligands for RPTKs include mainly secreted small proteins, but also membrane-bound and extracellular matrix proteins.

Activation of RPTK by ligands involves ligand-mediated receptor dimerization, resulting in transphosphorylation of the receptor subunits and activation of the cytoplasmic tyrosine kinases. The cytoplasmic tyrosine kinases include receptor associated tyrosine kinases of the src-family (e.g., src, yes, lck, lyn, fyn) and non-receptor linked and cytosolic protein tyrosine kinases, such as the Jak family, members of which mediate signal transduction triggered by the cytokine superfamily of receptors (e.g., the Interleukins, Interferons, GM-CSF, and Leptin).

Because of the wide range of known factors capable of stimulating tyrosine kinase activity, identifying whether polypeptide of the present invention or a molecule induced by polypeptide of the present invention is capable of activating tyrosine

kinase signal transduction pathways is of interest. Therefore, the following protocol is designed to identify such molecules capable of activating the tyrosine kinase signal transduction pathways.

Seed target cells (e.g., primary keratinocytes) at a density of approximately
5 25,000 cells per well in a 96 well Loprodyne Silent Screen Plates purchased from Nalge Nunc (Naperville, IL). The plates are sterilized with two 30 minute rinses with 100% ethanol, rinsed with water and dried overnight. Some plates are coated for 2 hr with 100 ml of cell culture grade type I collagen (50 mg/ml), gelatin (2%) or polylysine (50 mg/ml), all of which can be purchased from Sigma Chemicals (St.
10 Louis, MO) or 10% Matrigel purchased from Becton Dickinson (Bedford, MA), or calf serum, rinsed with PBS and stored at 4 degree C. Cell growth on these plates is assayed by seeding 5,000 cells/well in growth medium and indirect quantitation of cell number through use of alamarBlue as described by the manufacturer Alamar Biosciences, Inc. (Sacramento, CA) after 48 hr. Falcon plate covers #3071 from
15 Becton Dickinson (Bedford, MA) are used to cover the Loprodyne Silent Screen Plates. Falcon Microtest III cell culture plates can also be used in some proliferation experiments.

To prepare extracts, A431 cells are seeded onto the nylon membranes of Loprodyne plates (20,000/200ml/well) and cultured overnight in complete medium.
20 Cells are quiesced by incubation in serum-free basal medium for 24 hr. After 5-20 minutes treatment with EGF (60ng/ml) or 50 ul of the supernatant produced in Example 31, the medium was removed and 100 ml of extraction buffer ((20 mM HEPES pH 7.5, 0.15 M NaCl, 1% Triton X-100, 0.1% SDS, 2 mM Na₃VO₄, 2 mM Na₄P₂O₇ and a cocktail of protease inhibitors (# 1836170) obtained from
25 Boehringer Mannheim (Indianapolis, IN) is added to each well and the plate is shaken on a rotating shaker for 5 minutes at 4°C. The plate is then placed in a vacuum transfer manifold and the extract filtered through the 0.45 mm membrane bottoms of each well using house vacuum. Extracts are collected in a 96-well catch/assay plate in the bottom of the vacuum manifold and immediately placed on
30 ice. To obtain extracts clarified by centrifugation, the content of each well, after

detergent solubilization for 5 minutes, is removed and centrifuged for 15 minutes at 4 degree C at 16,000 x g.

Test the filtered extracts for levels of tyrosine kinase activity. Although many methods of detecting tyrosine kinase activity are known, one method is described
5 here.

Generally, the tyrosine kinase activity of a supernatant is evaluated by determining its ability to phosphorylate a tyrosine residue on a specific substrate (a biotinylated peptide). Biotinylated peptides that can be used for this purpose include PSK1 (corresponding to amino acids 6-20 of the cell division kinase cdc2-p34) and
10 PSK2 (corresponding to amino acids 1-17 of gastrin). Both peptides are substrates for a range of tyrosine kinases and are available from Boehringer Mannheim.

The tyrosine kinase reaction is set up by adding the following components in order. First, add 10ul of 5uM Biotinylated Peptide, then 10ul ATP/Mg₂⁺ (5mM ATP/50mM MgCl₂), then 10ul of 5x Assay Buffer (40mM imidazole hydrochloride,
15 pH7.3, 40 mM beta-glycerophosphate, 1mM EGTA, 100mM MgCl₂, 5 mM MnCl₂, 0.5 mg/ml BSA), then 5ul of Sodium Vanadate(1mM), and then 5ul of water. Mix the components gently and preincubate the reaction mix at 30 degree C for 2 min. Initial the reaction by adding 10ul of the control enzyme or the filtered supernatant.

The tyrosine kinase assay reaction is then terminated by adding 10 ul of
20 120mM EDTA and place the reactions on ice.

Tyrosine kinase activity is determined by transferring 50 ul aliquot of reaction mixture to a microtiter plate (MTP) module and incubating at 37 degree C for 20 min. This allows the streptavidin coated 96 well plate to associate with the biotinylated peptide. Wash the MTP module with 300ul/well of PBS four times. Next add 75 ul
25 of anti-phosphotyrosine antibody conjugated to horse radish peroxidase(anti-P-Tyr-POD(0.5u/ml)) to each well and incubate at 37 degree C for one hour. Wash the well as above.

Next add 100ul of peroxidase substrate solution (Boehringer Mannheim) and incubate at room temperature for at least 5 mins (up to 30 min). Measure the
30 absorbance of the sample at 405 nm by using ELISA reader. The level of bound

peroxidase activity is quantitated using an ELISA reader and reflects the level of tyrosine kinase activity.

Example 41: High-Throughput Screening Assay Identifying Phosphorylation Activity

5

As a potential alternative and/or compliment to the assay of protein tyrosine kinase activity described in Example 40, an assay which detects activation (phosphorylation) of major intracellular signal transduction intermediates can also be used. For example, as described below one particular assay can detect tyrosine phosphorylation of the Erk-1 and Erk-2 kinases. However, phosphorylation of other molecules, such as Raf, JNK, p38 MAP, Map kinase kinase (MEK), MEK kinase, Src, Muscle specific kinase (MuSK), IRAK, Tec, and Janus, as well as any other phosphoserine, phosphotyrosine, or phosphothreonine molecule, can be detected by substituting these molecules for Erk-1 or Erk-2 in the following assay.

15 Specifically, assay plates are made by coating the wells of a 96-well ELISA plate with 0.1ml of protein G (1ug/ml) for 2 hr at room temp, (RT). The plates are then rinsed with PBS and blocked with 3% BSA/PBS for 1 hr at RT. The protein G plates are then treated with 2 commercial monoclonal antibodies (100ng/well) against Erk-1 and Erk-2 (1 hr at RT) (Santa Cruz Biotechnology). (To detect other
20 molecules, this step can easily be modified by substituting a monoclonal antibody detecting any of the above described molecules.) After 3-5 rinses with PBS, the plates are stored at 4 degree C until use.

A431 cells are seeded at 20,000/well in a 96-well Loprodyne filterplate and cultured overnight in growth medium. The cells are then starved for 48 hr in basal
25 medium (DMEM) and then treated with EGF (6ng/well) or 50 ul of the supernatants obtained in Example 31 for 5-20 minutes. The cells are then solubilized and extracts filtered directly into the assay plate.

After incubation with the extract for 1 hr at RT, the wells are again rinsed. As a positive control, a commercial preparation of MAP kinase (10ng/well) is used in
30 place of A431 extract. Plates are then treated with a commercial polyclonal (rabbit)

antibody (1 µg/ml) which specifically recognizes the phosphorylated epitope of the Erk-1 and Erk-2 kinases (1 hr at RT). This antibody is biotinylated by standard procedures. The bound polyclonal antibody is then quantitated by successive incubations with Europium-streptavidin and Europium fluorescence enhancing reagent in the Wallac DELFIA instrument (time-resolved fluorescence). An increased fluorescent signal over background indicates a phosphorylation by polypeptide of the present invention or a molecule induced by polypeptide of the present invention.

Example 42: Assay for the Stimulation of Bone Marrow CD34+ Cell Proliferation

10

This assay is based on the ability of human CD34+ to proliferate in the presence of hematopoietic growth factors and evaluates the ability of isolated polypeptides expressed in mammalian cells to stimulate proliferation of CD34+ cells.

It has been previously shown that most mature precursors will respond to only a single signal. More immature precursors require at least two signals to respond. Therefore, to test the effect of polypeptides on hematopoietic activity of a wide range of progenitor cells, the assay contains a given polypeptide in the presence or absence of other hematopoietic growth factors. Isolated cells are cultured for 5 days in the presence of Stem Cell Factor (SCF) in combination with tested sample. SCF alone has a very limited effect on the proliferation of bone marrow (BM) cells, acting in such conditions only as a "survival" factor. However, combined with any factor exhibiting stimulatory effect on these cells (e.g., IL-3), SCF will cause a synergistic effect. Therefore, if the tested polypeptide has a stimulatory effect on a hematopoietic progenitors, such activity can be easily detected. Since normal BM cells have a low level of cycling cells, it is likely that any inhibitory effect of a given polypeptide, or agonists or antagonists thereof, might not be detected. Accordingly, assays for an inhibitory effect on progenitors is preferably tested in cells that are first subjected to *in vitro* stimulation with SCF+IL+3, and then contacted with the compound that is being evaluated for inhibition of such induced proliferation.

30

Briefly, CD34+ cells are isolated using methods known in the art. The cells

are thawed and resuspended in medium (QBSF 60 serum-free medium with 1% L-glutamine (500ml) Quality Biological, Inc., Gaithersburg, MD Cat# 160-204-101). After several gentle centrifugation steps at 200 x g, cells are allowed to rest for one hour. The cell count is adjusted to 2.5×10^5 cells/ml. During this time, 100 μ l of
5 sterile water is added to the peripheral wells of a 96-well plate. The cytokines that can be tested with a given polypeptide in this assay is rhSCF (R&D Systems, Minneapolis, MN, Cat# 255-SC) at 50 ng/ml alone and in combination with rhSCF and rhIL-3 (R&D Systems, Minneapolis, MN, Cat# 203-ML) at 30 ng/ml. After one hour, 10 μ l of prepared cytokines, 50 μ l of the supernatants prepared in Example 31
10 (supernatants at 1:2 dilution = 50 μ l) and 20 μ l of diluted cells are added to the media which is already present in the wells to allow for a final total volume of 100 μ l. The plates are then placed in a 37°C/5% CO₂ incubator for five days.

Eighteen hours before the assay is harvested, 0.5 μ Ci/well of [3H] Thymidine is added in a 10 μ l volume to each well to determine the proliferation rate. The
15 experiment is terminated by harvesting the cells from each 96-well plate to a filtermat using the Tomtec Harvester 96. After harvesting, the filtermats are dried, trimmed and placed into OmniFilter assemblies consisting of one OmniFilter plate and one OmniFilter Tray. 60 μ l Microscint is added to each well and the plate sealed with
TopSeal-A press-on sealing film. A bar code 15 sticker is affixed to the first plate for
20 counting. The sealed plates is then loaded and the level of radioactivity determined via the Packard Top Count and the printed data collected for analysis. The level of radioactivity reflects the amount of cell proliferation.

The studies described in this example test the activity of a given polypeptide to stimulate bone marrow CD34+ cell proliferation. One skilled in the art could
25 easily modify the exemplified studies to test the activity of polynucleotides (e.g., gene therapy), antibodies, agonists, and/or antagonists and fragments and variants thereof. As a nonlimiting example, potential antagonists tested in this assay would be expected to inhibit cell proliferation in the presence of cytokines and/or to increase the inhibition of cell proliferation in the presence of cytokines and a given polypeptide.
30 In contrast, potential agonists tested in this assay would be expected to enhance cell

proliferation and/or to decrease the inhibition of cell proliferation in the presence of cytokines and a given polypeptide.

The ability of a gene to stimulate the proliferation of bone marrow CD34+ cells indicates that polynucleotides and polypeptides corresponding to the gene are
5 useful for the diagnosis and treatment of disorders affecting the immune system and hematopoiesis. Representative uses are described in the "Immune Activity" and "Infectious Disease" sections above, and elsewhere herein.

Example 43: Assay for Extracellular Matrix Enhanced Cell Response (EMECCR)

10

The objective of the Extracellular Matrix Enhanced Cell Response (EMECCR) assay is to identify gene products (e.g., isolated polypeptides) that act on the hematopoietic stem cells in the context of the extracellular matrix (ECM) induced signal.

15

Cells respond to the regulatory factors in the context of signal(s) received from the surrounding microenvironment. For example, fibroblasts, and endothelial and epithelial stem cells fail to replicate in the absence of signals from the ECM. Hematopoietic stem cells can undergo self-renewal in the bone marrow, but not in *in vitro* suspension culture. The ability of stem cells to undergo self-renewal *in vitro* is
20 dependent upon their interaction with the stromal cells and the ECM protein fibronectin (fn). Adhesion of cells to fn is mediated by the $\alpha_5\beta_1$ and $\alpha_4\beta_1$ integrin receptors, which are expressed by human and mouse hematopoietic stem cells. The factor(s) which integrate with the ECM environment and responsible for stimulating stem cell self-renewal has not yet been identified. Discovery of such factors should
25 be of great interest in gene therapy and bone marrow transplant applications

Briefly, polystyrene, non tissue culture treated, 96-well plates are coated with fn fragment at a coating concentration of $0.2 \mu\text{g}/\text{cm}^2$. Mouse bone marrow cells are plated (1,000 cells/well) in 0.2 ml of serum-free medium. Cells cultured in the presence of IL-3 (5 ng/ml) + SCF (50 ng/ml) would serve as the positive control,

conditions under which little self-renewal but pronounced differentiation of the stem cells is to be expected. Gene products of the invention (e.g., including, but not limited to, polynucleotides and polypeptides of the present invention, and supernatants produced in Example 31), are tested with appropriate negative controls in the presence and absence of SCF(5.0 ng/ml), where test factor supernates represent 10% of the total assay volume. The plated cells are then allowed to grow by incubating in a low oxygen environment (5% CO₂, 7% O₂, and 88% N₂) tissue culture incubator for 7 days. The number of proliferating cells within the wells is then quantitated by measuring thymidine incorporation into cellular DNA. Verification of the positive hits in the assay will require phenotypic characterization of the cells, which can be accomplished by scaling up of the culture system and using appropriate antibody reagents against cell surface antigens and FACScan.

One skilled in the art could easily modify the exemplified studies to test the activity of polynucleotides (e.g., gene therapy), antibodies, agonists, and/or antagonists and fragments and variants thereof.

If a particular polypeptide of the present invention is found to be a stimulator of hematopoietic progenitors, polynucleotides and polypeptides corresponding to the gene encoding said polypeptide may be useful for the diagnosis and treatment of disorders affecting the immune system and hematopoiesis. Representative uses are described in the "Immune Activity" and "Infectious Disease" sections above, and elsewhere herein. The gene product may also be useful in the expansion of stem cells and committed progenitors of various blood lineages, and in the differentiation and/or proliferation of various cell types.

Additionally, the polynucleotides and/or polypeptides of the gene of interest and/or agonists and/or antagonists thereof, may also be employed to inhibit the proliferation and differentiation of hematopoietic cells and therefore may be employed to protect bone marrow stem cells from chemotherapeutic agents during chemotherapy. This antiproliferative effect may allow administration of higher doses of chemotherapeutic agents and, therefore, more effective chemotherapeutic treatment.

Moreover, polynucleotides and polypeptides corresponding to the gene of interest may also be useful for the treatment and diagnosis of hematopoietic related disorders such as, for example, anemia, pancytopenia, leukopenia, thrombocytopenia or leukemia since stromal cells are important in the production of cells of hematopoietic lineages. The uses include bone marrow cell ex-vivo culture, bone marrow transplantation, bone marrow reconstitution, radiotherapy or chemotherapy of neoplasia.

Example 44: Human Dermal Fibroblast and Aortic Smooth Muscle Cell Proliferation

10

The polypeptide of interest is added to cultures of normal human dermal fibroblasts (NHDF) and human aortic smooth muscle cells (AoSMC) and two co-assays are performed with each sample. The first assay examines the effect of the polypeptide of interest on the proliferation of normal human dermal fibroblasts (NHDF) or aortic smooth muscle cells (AoSMC). Aberrant growth of fibroblasts or smooth muscle cells is a part of several pathological processes, including fibrosis, and restenosis. The second assay examines IL6 production by both NHDF and SMC. IL6 production is an indication of functional activation. Activated cells will have increased production of a number of cytokines and other factors, which can result in a proinflammatory or immunomodulatory outcome. Assays are run with and without co-TNF α stimulation, in order to check for costimulatory or inhibitory activity.

Briefly, on day 1, 96-well black plates are set up with 1000 cells/well (NHDF) or 2000 cells/well (AoSMC) in 100 μ l culture media. NHDF culture media contains: Clonetics FB basal media, 1mg/ml hFGF, 5mg/ml insulin, 50mg/ml gentamycin, 2%FBS, while AoSMC culture media contains Clonetics SM basal media, 0.5 μ g/ml hEGF, 5mg/ml insulin, 1 μ g/ml hFGF, 50mg/ml gentamycin, 50 μ g/ml Amphotericin B, 5%FBS. After incubation at 37°C for at least 4-5 hours, culture media is aspirated and replaced with growth arrest media. Growth arrest media for NHDF contains fibroblast basal media, 50mg/ml gentamycin, 2% FBS, while growth arrest media for AoSMC contains SM basal media, 50mg/ml gentamycin, 50 μ g/ml Amphotericin B,

30

0.4% FBS. Incubate at 37°C until day 2.

On day 2, serial dilutions and templates of the polypeptide of interest are designed such that they always include media controls and known-protein controls. For both stimulation and inhibition experiments, proteins are diluted in growth arrest
5 media. For inhibition experiments, TNFa is added to a final concentration of 2ng/ml (NHDF) or 5ng/ml (AoSMC). Add 1/3 vol media containing controls or polypeptides of the present invention and incubate at 37°C/5% CO₂ until day 5.

Transfer 60µl from each well to another labeled 96-well plate, cover with a plate-sealer, and store at 4°C until Day 6 (for IL6 ELISA). To the remaining 100 µl in
10 the cell culture plate, aseptically add Alamar Blue in an amount equal to 10% of the culture volume (10µl). Return plates to incubator for 3 to 4 hours. Then measure fluorescence with excitation at 530nm and emission at 590nm using the CytoFluor. This yields the growth stimulation/inhibition data.

On day 5, the IL6 ELISA is performed by coating a 96 well plate with 50-100
15 µl/well of Anti-Human IL6 Monoclonal antibody diluted in PBS, pH 7.4, incubate ON at room temperature.

On day 6, empty the plates into the sink and blot on paper towels. Prepare Assay Buffer containing PBS with 4% BSA. Block the plates with 200 µl/well of Pierce Super Block blocking buffer in PBS for 1-2 hr and then wash plates with wash
20 buffer (PBS, 0.05% Tween-20). Blot plates on paper towels. Then add 50 µl/well of diluted Anti-Human IL-6 Monoclonal, Biotin-labeled antibody at 0.50 mg/ml. Make dilutions of IL-6 stock in media (30, 10, 3, 1, 0.3, 0 ng/ml). Add duplicate samples to top row of plate. Cover the plates and incubate for 2 hours at RT on shaker. Plates are washed with wash buffer and blotted on paper towels. Dilute EU-labeled Streptavidin
25 1:1000 in Assay buffer, and add 100 µl/well. Cover the plate and incubate 1 h at RT. Plates are again washed with wash buffer and blotted on paper towels. Add 100 µl/well of Enhancement Solution and shake for 5 minutes. Read the plate on the Wallac DELFIA Fluorometer. Readings from triplicate samples in each assay are tabulated and averaged.

30 A positive result in this assay suggests AoSMC cell proliferation and that the

polypeptide of the present invention may be involved in dermal fibroblast proliferation and/or smooth muscle cell proliferation. A positive result also suggests many potential uses of polypeptides, polynucleotides, agonists and/or antagonists of the polynucleotide/polypeptide of the present invention which gives a positive result.

5 For example, inflammation and immune responses, wound healing, and angiogenesis, as detailed throughout this specification. Particularly, polypeptides of the present invention and polynucleotides of the present invention may be used in wound healing and dermal regeneration, as well as the promotion of vasculogenesis, both of the blood vessels and lymphatics. The growth of vessels can be used in the treatment of,
10 for example, cardiovascular diseases. Additionally, antagonists of polypeptides and polynucleotides of the invention may be useful in treating diseases, disorders, and/or conditions which involve angiogenesis by acting as an anti-vascular (e.g., anti-angiogenesis). These diseases, disorders, and/or conditions are known in the art and/or are described herein, such as, for example, malignancies, solid tumors, benign
15 tumors, for example hemangiomas, acoustic neuromas, neurofibromas, trachomas, and pyogenic granulomas; arteriosclerotic plaques; ocular angiogenic diseases, for example, diabetic retinopathy, retinopathy of prematurity, macular degeneration, corneal graft rejection, neovascular glaucoma, retrolental fibroplasia, rubeosis, retinoblastoma, uveitis and Pterygia (abnormal blood vessel growth) of the eye;
20 rheumatoid arthritis; psoriasis; delayed wound healing; endometriosis; vasculogenesis; granulations; hypertrophic scars (keloids); nonunion fractures; scleroderma; trachoma; vascular adhesions; myocardial angiogenesis; coronary collaterals; cerebral collaterals; arteriovenous malformations; ischemic limb angiogenesis; Osler-Webber Syndrome; plaque neovascularization; telangiectasia;
25 hemophiliac joints; angiofibroma; fibromuscular dysplasia; wound granulation; Crohn's disease; and atherosclerosis. Moreover, antagonists of polypeptides and polynucleotides of the invention may be useful in treating anti-hyperproliferative diseases and/or anti-inflammatory known in the art and/or described herein.

One skilled in the art could easily modify the exemplified studies to test the
30 activity of polynucleotides (e.g., gene therapy), antibodies, agonists, and/or

antagonists and fragments and variants thereof.

Example 45: Cellular Adhesion Molecule (CAM) Expression on Endothelial Cells

5

The recruitment of lymphocytes to areas of inflammation and angiogenesis involves specific receptor-ligand interactions between cell surface adhesion molecules (CAMs) on lymphocytes and the vascular endothelium. The adhesion process, in both normal and pathological settings, follows a multi-step cascade that involves
10 intercellular adhesion molecule-1 (ICAM-1), vascular cell adhesion molecule-1 (VCAM-1), and endothelial leukocyte adhesion molecule-1 (E-selectin) expression on endothelial cells (EC). The expression of these molecules and others on the vascular endothelium determines the efficiency with which leukocytes may adhere to the local vasculature and extravasate into the local tissue during the development of an
15 inflammatory response. The local concentration of cytokines and growth factor participate in the modulation of the expression of these CAMs.

Briefly, endothelial cells (e.g., Human Umbilical Vein Endothelial cells (HUVECs)) are grown in a standard 96 well plate to confluence, growth medium is removed from the cells and replaced with 100 μ l of 199 Medium (10% fetal bovine
20 serum (FBS)). Samples for testing and positive or negative controls are added to the plate in triplicate (in 10 μ l volumes). Plates are then incubated at 37°C for either 5 h (selectin and integrin expression) or 24 h (integrin expression only). Plates are aspirated to remove medium and 100 μ l of 0.1% paraformaldehyde-PBS(with Ca⁺⁺ and Mg⁺⁺) is added to each well. Plates are held at 4°C for 30 min. Fixative is
25 removed from the wells and wells are washed 1X with PBS(+Ca,Mg) + 0.5% BSA and drained. 10 μ l of diluted primary antibody is added to the test and control wells. Anti-ICAM-1-Biotin, Anti-VCAM-1-Biotin and Anti-E-selectin-Biotin are used at a concentration of 10 μ g/ml (1:10 dilution of 0.1 mg/ml stock antibody). Cells are incubated at 37°C for 30 min. in a humidified environment. Wells are washed three
30 times with PBS(+Ca,Mg) + 0.5% BSA. 20 μ l of diluted ExtrAvidin-Alkaline

Phosphatase (1:5,000 dilution, referred to herein as the working dilution) are added to each well and incubated at 37°C for 30 min. Wells are washed three times with PBS(+Ca,Mg)+0.5% BSA. Dissolve 1 tablet of p-Nitrophenol Phosphate pNPP per 5 ml of glycine buffer (pH 10.4). 100 µl of pNPP substrate in glycine buffer is added to each test well. Standard wells in triplicate are prepared from the working dilution of the ExtrAvidin-Alkaline Phosphatase in glycine buffer: 1:5,000 (10^0) > $10^{-0.5}$ > 10^{-1} > $10^{-1.5}$. 5 µl of each dilution is added to triplicate wells and the resulting AP content in each well is 5.50 ng, 1.74 ng, 0.55 ng, 0.18 ng. 100 µl of pNPP reagent is then added to each of the standard wells. The plate is incubated at 37°C for 4h. A volume of 50 µl of 3M NaOH is added to all wells. The plate is read on a plate reader at 405 nm using the background subtraction option on blank wells filled with glycine buffer only. Additionally, the template is set up to indicate the concentration of AP-conjugate in each standard well [5.50 ng; 1.74 ng; 0.55 ng; 0.18 ng]. Results are indicated as amount of bound AP-conjugate in each sample.

Example 46: Alamar Blue Endothelial Cells Proliferation Assay

This assay may be used to quantitatively determine protein mediated inhibition of bFGF-induced proliferation of Bovine Lymphatic Endothelial Cells (LECs), Bovine Aortic Endothelial Cells (BAECs) or Human Microvascular Uterine Myometrial Cells (UTMECs). This assay incorporates a fluorometric growth indicator based on detection of metabolic activity. A standard Alamar Blue Proliferation Assay is prepared in EGM-2MV with 10 ng /ml of bFGF added as a source of endothelial cell stimulation. This assay may be used with a variety of endothelial cells with slight changes in growth medium and cell concentration. Dilutions of the protein batches to be tested are diluted as appropriate. Serum-free medium (GIBCO SFM) without bFGF is used as a non-stimulated control and Angiostatin or TSP-1 are included as a known inhibitory controls.

Briefly, LEC, BAECs or UTMECs are seeded in growth media at a density of 5000 to 2000 cells/well in a 96 well plate and placed at 37-C overnight. After the

overnight incubation of the cells, the growth media is removed and replaced with GIBCO EC-SFM. The cells are treated with the appropriate dilutions of the protein of interest or control protein sample(s) (prepared in SFM) in triplicate wells with additional bFGF to a concentration of 10 ng/ ml. Once the cells have been treated
5 with the samples, the plate(s) is/are placed back in the 37° C incubator for three days. After three days 10 ml of stock alamar blue (Biosource Cat# DAL1100) is added to each well and the plate(s) is/are placed back in the 37°C incubator for four hours. The plate(s) are then read at 530nm excitation and 590nm emission using the CytoFluor fluorescence reader. Direct output is recorded in relative fluorescence units.

10 Alamar blue is an oxidation-reduction indicator that both fluoresces and changes color in response to chemical reduction of growth medium resulting from cell growth. As cells grow in culture, innate metabolic activity results in a chemical reduction of the immediate surrounding environment. Reduction related to growth causes the indicator to change from oxidized (non-fluorescent blue) form to reduced
15 (fluorescent red) form. i.e. stimulated proliferation will produce a stronger signal and inhibited proliferation will produce a weaker signal and the total signal is proportional to the total number of cells as well as their metabolic activity. The background level of activity is observed with the starvation medium alone. This is compared to the output observed from the positive control samples (bFGF in growth medium) and
20 protein dilutions.

Example 47: Detection of Inhibition of a Mixed Lymphocyte Reaction

This assay can be used to detect and evaluate inhibition of a Mixed
25 Lymphocyte Reaction (MLR) by gene products (e.g., isolated polypeptides). Inhibition of a MLR may be due to a direct effect on cell proliferation and viability, modulation of costimulatory molecules on interacting cells, modulation of adhesiveness between lymphocytes and accessory cells, or modulation of cytokine production by accessory cells. Multiple cells may be targeted by these polypeptides

since the peripheral blood mononuclear fraction used in this assay includes T, B and natural killer lymphocytes, as well as monocytes and dendritic cells.

Polypeptides of interest found to inhibit the MLR may find application in diseases associated with lymphocyte and monocyte activation or proliferation. These
5 include, but are not limited to, diseases such as asthma, arthritis, diabetes, inflammatory skin conditions, psoriasis, eczema, systemic lupus erythematosus, multiple sclerosis, glomerulonephritis, inflammatory bowel disease, crohn's disease, ulcerative colitis, arteriosclerosis, cirrhosis, graft vs. host disease, host vs. graft disease, hepatitis, leukemia and lymphoma.

10 Briefly, PBMCs from human donors are purified by density gradient centrifugation using Lymphocyte Separation Medium (LSM®, density 1.0770 g/ml, Organon Teknika Corporation, West Chester, PA). PBMCs from two donors are adjusted to 2×10^6 cells/ml in RPMI-1640 (Life Technologies, Grand Island, NY) supplemented with 10% FCS and 2 mM glutamine. PBMCs from a third donor is
15 adjusted to 2×10^5 cells/ml. Fifty microliters of PBMCs from each donor is added to wells of a 96-well round bottom microtiter plate. Dilutions of test materials (50 μ l) is added in triplicate to microtiter wells. Test samples (of the protein of interest) are added for final dilution of 1:4; rhIL-2 (R&D Systems, Minneapolis, MN, catalog number 202-IL) is added to a final concentration of 1 μ g/ml; anti-CD4 mAb (R&D
20 Systems, clone 34930.11, catalog number MAB379) is added to a final concentration of 10 μ g/ml. Cells are cultured for 7-8 days at 37°C in 5% CO₂, and 1 μ C of [³H] thymidine is added to wells for the last 16 hrs of culture. Cells are harvested and thymidine incorporation determined using a Packard TopCount. Data is expressed as the mean and standard deviation of triplicate determinations.

25 Samples of the protein of interest are screened in separate experiments and compared to the negative control treatment, anti-CD4 mAb, which inhibits proliferation of lymphocytes and the positive control treatment, IL-2 (either as recombinant material or supernatant), which enhances proliferation of lymphocytes.

One skilled in the art could easily modify the exemplified studies to test the
30 activity of polynucleotides (e.g., gene therapy), antibodies, agonists, and/or

antagonists and fragments and variants thereof.

It will be clear that the invention may be practiced otherwise than as particularly described in the foregoing description and examples. Numerous modifications and variations of the present invention are possible in light of the above teachings and, therefore, are within the scope of the appended claims.

The entire disclosure of each document cited (including patents, patent applications, journal articles, abstracts, laboratory manuals, books, or other disclosures) in the Background of the Invention, Detailed Description, and Examples is hereby incorporated herein by reference. Further, the hard copy of the sequence listing submitted herewith and the corresponding computer readable form are both incorporated herein by reference in their entireties. Moreover, the hard copy of and the corresponding computer readable form of the Sequence Listing of Serial No. 60/124,270 are also incorporated herein by reference in their entireties.

539

Applicant's or agent's file reference number	PA106PCT	International application	UNASSIGNED
--	----------	---------------------------	------------

INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>121</u> line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT Further deposits are identified on an additional sheet <input type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 20 May 1997	Accession Number 209059
C. ADDITIONAL INDICATIONS (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC).	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	

<p>For receiving Office use only</p> <p><input checked="" type="checkbox"/> This sheet was received with the international application</p> <p>Authorized officer Jerry M. Bower PCT/International Processing Div. (703) 305-6389</p>	<p>For International Bureau use only</p> <p><input type="checkbox"/> This sheet was received by the International Bureau on:</p> <p>Authorized officer</p>
---	--

ATCC Deposit No. 209059**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

NORWAY

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

AUSTRALIA

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

FINLAND

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

UNITED KINGDOM

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

Page 2**ATCC Deposit No. 209059****DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

SWEDEN

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

NETHERLANDS

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

542

Applicant's or agent's file reference number	PA106PCT	International application?	UNASSIGNED
---	----------	----------------------------	------------

INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>121</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT Further deposits are identified on an additional sheet <input type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 20 May 1997	Accession Number 209060
C. ADDITIONAL INDICATIONS (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC).	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	

<p>For receiving Office use only</p> <p><input checked="" type="checkbox"/> This sheet was received with the international application</p> <p>Authorized officer PCT/International Processing Div. (703) 395-3039</p>	<p>For International Bureau use only</p> <p><input type="checkbox"/> This sheet was received by the International Bureau on:</p> <p>Authorized officer</p>
---	--

ATCC Deposit No. 209060**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

NORWAY

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

AUSTRALIA

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

FINLAND

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

UNITED KINGDOM

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

Page 2

ATCC Deposit No. 209060

DENMARK

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

SWEDEN

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by an applicant in the individual case.

NETHERLANDS

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

545

Applicant's or agent's file reference number	PA106PCT	International application N°	UNASSIGNED
--	----------	------------------------------	------------

INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>121</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT Further deposits are identified on an additional sheet <input type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 20 May 1997	Accession Number 209061
C. ADDITIONAL INDICATIONS (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC).	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	

For receiving Office use only <input checked="" type="checkbox"/> This sheet was received with the international application Authorized officer PCT/Internat'l Appl Processing Div. (703) 305-3639	For International Bureau use only <input type="checkbox"/> This sheet was received by the International Bureau on: Authorized officer
---	--

ATCC Deposit No. 209061**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

NORWAY

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

AUSTRALIA

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

FINLAND

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

UNITED KINGDOM

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

Page 2

ATCC Deposit No. 209061

DENMARK

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

SWEDEN

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

NETHERLANDS

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

548

Applicant's or agent's file reference number	PA106PCT	International application	UNASSIGNED
---	----------	---------------------------	------------

INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>121</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT Further deposits are identified on an additional sheet <input type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 20 May 1997	Accession Number 209062
C. ADDITIONAL INDICATIONS (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States) Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC).	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable) The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	

<p>For receiving Office use only</p> <p><input checked="" type="checkbox"/> This sheet was received with the international application</p> <p>Authorized officer PCT/Internat'l Appl Processing Div. (703) 305-3639</p>	<p>For International Bureau use only</p> <p><input type="checkbox"/> This sheet was received by the International Bureau on:</p> <p>Authorized officer</p>
---	--

ATCC Deposit No. 209062**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

NORWAY

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

AUSTRALIA

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

FINLAND

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

UNITED KINGDOM

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

Page 2**ATCC Deposit No. 209062****DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

SWEDEN

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

NETHERLANDS

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

551

Applicant's or agent's file reference number	PA106PCT	International application f	UNASSIGNED
---	----------	-----------------------------	------------

INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>121</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT Further deposits are identified on an additional sheet <input type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 20 May 1997	Accession Number 209063
C. ADDITIONAL INDICATIONS (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC).	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	

<p>For receiving Office use only</p> <p><input checked="" type="checkbox"/> This sheet was received with the international application</p> <p>Authorized officer PCT/International Appl Processing Div. (703) 305-3639</p>	<p>For International Bureau use only</p> <p><input type="checkbox"/> This sheet was received by the International Bureau on:</p> <p>Authorized officer</p>
--	--

ATCC Deposit No. 209063**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

NORWAY

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

AUSTRALIA

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

FINLAND

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

UNITED KINGDOM

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

Page 2**ATCC Deposit No. 209063****DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

SWEDEN

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

NETHERLANDS

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

554

Applicant's or agent's file reference number	PA106PCT	International application	UNASSIGNED
---	----------	---------------------------	------------

INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>121</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT Further deposits are identified on an additional sheet <input type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 20 May 1997	Accession Number 209064
C. ADDITIONAL INDICATIONS (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC).	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	

<input checked="" type="checkbox"/> For receiving Office use only This sheet was received with the international application	<input type="checkbox"/> For International Bureau use only This sheet was received by the International Bureau on:
Authorized officer Isabel Powell PCT/Internal Model Processing Div. (703) 305-3639	Authorized officer

ATCC Dep sit No. 209064

CANADA

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

NORWAY

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

AUSTRALIA

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

FINLAND

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

UNITED KINGDOM

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

Page 2**ATCC Deposit No. 209064****DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

SWEDEN

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

NETHERLANDS

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

Applicant's or agent's file reference number	PA106PCT	557 International application	UNASSIGNED
---	----------	----------------------------------	------------

INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>121</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT Further deposits are identified on an additional sheet <input type="checkbox"/>	
Name of depositary institution <u>American Type Culture Collection</u>	
Address of depositary institution (including postal code and country) <u>10801 University Boulevard</u> <u>Manassas, Virginia 20110-2209</u> <u>United States of America</u>	
Date of deposit <u>20 May 1997</u>	Accession Number <u>209065</u>
C. ADDITIONAL INDICATIONS (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC).	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	

For receiving Office use only	For International Bureau use only
<input checked="" type="checkbox"/> This sheet was received with the international application	<input type="checkbox"/> This sheet was received by the International Bureau on:
Authorized officer <u>Processing Div.</u> <u>(703) 305-5639</u>	Authorized officer

ATCC Deposit N . 209065**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

NORWAY

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

AUSTRALIA

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

FINLAND

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

UNITED KINGDOM

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

Page 2**ATCC Deposit No. 209065****DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

SWEDEN

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

NETHERLANDS

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

560

Applicant's or agent's file reference number	PA106PCT	International application	UNASSIGNED
---	----------	---------------------------	------------

INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>121</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT Further deposits are identified on an additional sheet <input type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 20 May 1997	Accession Number 209066
C. ADDITIONAL INDICATIONS (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC).	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	

<input checked="" type="checkbox"/> For receiving Office use only This sheet was received with the international application Authorized officer PCT/International Processing Div. (703) 305-3639	<input type="checkbox"/> For International Bureau use only This sheet was received by the International Bureau on: Authorized officer
--	---

ATCC Deposit No. 209066**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

NORWAY

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

AUSTRALIA

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

FINLAND

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

UNITED KINGDOM

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

Page 2

ATCC Deposit No. 209066

DENMARK

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

SWEDEN

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

NETHERLANDS

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

563

Applicant's or agent's file reference number	PA106PCT	International application number	UNASSIGNED
--	----------	----------------------------------	------------

INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>121</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT Further deposits are identified on an additional sheet <input type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 20 May 1997	Accession Number 209067
C. ADDITIONAL INDICATIONS (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC).	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	

For receiving Office use only	For International Bureau use only
<input checked="" type="checkbox"/> This sheet was received with the international application	<input type="checkbox"/> This sheet was received by the International Bureau on:
Authorized officer Processing Div. (703) 603-6039	Authorized officer

ATCC Deposit No. 209067**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

NORWAY

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

AUSTRALIA

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

FINLAND

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

UNITED KINGDOM

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

Page 2**ATCC Deposit No. 209067****DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

SWEDEN

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

NETHERLANDS

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

566

Applicant's or agent's file reference number	PA106PCT	International application?	UNASSIGNED
---	----------	----------------------------	------------

INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>121</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT Further deposits are identified on an additional sheet <input type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 20 May 1997	Accession Number 209068
C. ADDITIONAL INDICATIONS (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC).	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	

<input checked="" type="checkbox"/> For receiving Office use only This sheet was received with the international application Authorized officer: PCT/International Processing Div. (703) 305-3339	<input type="checkbox"/> For International Bureau use only This sheet was received by the International Bureau on: Authorized officer:
---	--

ATCC Deposit N . 209068**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

NORWAY

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

AUSTRALIA

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

FINLAND

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

UNITED KINGDOM

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

Page 2

ATCC Dep sit No. 209068

DENMARK

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

SWEDEN

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

NETHERLANDS

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

569

Applicant's or agent's file reference number	PA106PCT	International application?	UNASSIGNED
---	----------	----------------------------	------------

INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>121</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT Further deposits are identified on an additional sheet <input type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 20 May 1997	Accession Number 209069
C. ADDITIONAL INDICATIONS (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC).	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	

<p>For receiving Office use only</p> <p><input checked="" type="checkbox"/> This sheet was received with the international application</p> <p>Authorized officer: PCT/Internat'l Appl Processing Div. (703) 305-8639</p>	<p>For International Bureau use only</p> <p><input type="checkbox"/> This sheet was received by the International Bureau on:</p> <p>Authorized officer</p>
--	--

ATCC Deposit No. 209069**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

NORWAY

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

AUSTRALIA

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

FINLAND

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

UNITED KINGDOM

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

Page 2**ATCC Deposit No. 209069****DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

SWEDEN

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

NETHERLANDS

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

572

Applicant's or agent's file reference number	PA106PCT	International application	UNASSIGNED
--	----------	---------------------------	------------

INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>121</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT Further deposits are identified on an additional sheet <input type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 12 January 1998	Accession Number 209579
C. ADDITIONAL INDICATIONS (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC).	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	

<p>For receiving Office use only</p> <p><input checked="" type="checkbox"/> This sheet was received with the international application</p> <p>Authorized officer Judy A. Brown PCT/Internat'l Appl Processing Div. (703) 305-3639</p>	<p>For International Bureau use only</p> <p><input type="checkbox"/> This sheet was received by the International Bureau on:</p> <p>Authorized officer</p>
---	--

ATCC Deposit N . 209579**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

NORWAY

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

AUSTRALIA

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

FINLAND

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

UNITED KINGDOM

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

Page 2

ATCC Dep sit No. 209579

DENMARK

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

SWEDEN

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

NETHERLANDS

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

575

Applicant's or agent's file reference number	PA106PCT	International application	UNASSIGNED
--	----------	---------------------------	------------

INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>121</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT Further deposits are identified on an additional sheet <input type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 12 January 1998	Accession Number 209578
C. ADDITIONAL INDICATIONS (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC).	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	

<input checked="" type="checkbox"/> For receiving Office use only This sheet was received with the international application Authorized officer Jerry Lee Brown PCT/International Appl Processing Div. (703) 305-6000	<input type="checkbox"/> For International Bureau use only This sheet was received by the International Bureau on: Authorized officer
--	---

ATCC Dep sit N . 209578**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

NORWAY

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

AUSTRALIA

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

FINLAND

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

UNITED KINGDOM

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

Page 2

ATCC Deposit No. 209578

DENMARK

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

SWEDEN

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

NETHERLANDS

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

578

Applicant's or agent's file reference number	PA106PCT	International application	UNASSIGNED
---	----------	---------------------------	------------

INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>121</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT Further deposits are identified on an additional sheet <input type="checkbox"/>	
Name of depositary institution <u>American Type Culture Collection</u>	
Address of depositary institution (including postal code and country) <u>10801 University Boulevard</u> <u>Manassas, Virginia 20110-2209</u> <u>United States of America</u>	
Date of deposit <u>16 July 1998</u>	Accession Number <u>203067</u>
C. ADDITIONAL INDICATIONS (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States)	
<u>Europe</u> In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC).	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	

For receiving Office use only <input checked="" type="checkbox"/> This sheet was received with the international application Authorized officer <u>Terry McDowell</u> <u>PCT/Internat'l Appl Processing Div.</u> <u>(703) 305-3639</u>	For International Bureau use only <input type="checkbox"/> This sheet was received by the International Bureau on: Authorized officer
---	--

ATCC Deposit No. 203067**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

NORWAY

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

AUSTRALIA

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

FINLAND

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

UNITED KINGDOM

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

Page 2

ATCC Deposit No. 203067

DENMARK

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

SWEDEN

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

NETHERLANDS

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

581

Applicant's or agent's file reference number	PA106PCT	International application	UNASSIGNED
---	----------	---------------------------	------------

INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>121</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT Further deposits are identified on an additional sheet <input type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 16 July 1998	Accession Number 203068
C. ADDITIONAL INDICATIONS (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States) Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC).	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable) The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	

<p>For receiving Office use only</p> <p><input checked="" type="checkbox"/> This sheet was received with the international application</p> <p>Authorized officer Jerald M. Bowen PCT/International Appl Processing Div. (703) 305-3339</p>	<p>For International Bureau use only</p> <p><input type="checkbox"/> This sheet was received by the International Bureau on:</p> <p>Authorized officer</p>
--	--

ATCC Deposit No. 203068**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

NORWAY

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

AUSTRALIA

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

FINLAND

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

UNITED KINGDOM

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

Page 2

ATCC Deposit No. 203068

DENMARK

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

SWEDEN

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

NETHERLANDS

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

584

Applicant's or agent's file reference number	PA106PCT	International application	UNASSIGNED
---	----------	---------------------------	------------

INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>121</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT Further deposits are identified on an additional sheet <input type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 1 February 1999	Accession Number 203609
C. ADDITIONAL INDICATIONS (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC).	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	

For receiving Office use only <input checked="" type="checkbox"/> This sheet was received with the international application Jeryl McDowell Authorized officer PCT/International Appl Processing Div. (703) 305-5639	For International Bureau use only <input type="checkbox"/> This sheet was received by the International Bureau on: Authorized officer
--	--

ATCC Deposit No. 203609**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

NORWAY

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

AUSTRALIA

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

FINLAND

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

UNITED KINGDOM

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

Page 2**ATCC Deposit No. 203609****DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

SWEDEN

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

NETHERLANDS

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

587

Applicant's or agent's file reference number	PA106PCT	International application	UNASSIGNED
---	----------	---------------------------	------------

INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>121</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT Further deposits are identified on an additional sheet <input type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 1 February 1999	Accession Number 203610
C. ADDITIONAL INDICATIONS (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC).	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	

<input checked="" type="checkbox"/> For receiving Office use only This sheet was received with the international application Authorized officer Jeryl MacCowell PCT/International Appl Processing Div. (703) 205-3639	<input type="checkbox"/> For International Bureau use only This sheet was received by the International Bureau on: Authorized officer
--	---

ATCC Deposit No. 203610**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

NORWAY

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

AUSTRALIA

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

FINLAND

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

UNITED KINGDOM

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

Page 2

ATCC Deposit No. 203610

DENMARK

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

SWEDEN

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

NETHERLANDS

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

590

Applicant's or agent's file reference number	PA106PCT	International application	UNASSIGNED
---	----------	---------------------------	------------

INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>121</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT Further deposits are identified on an additional sheet <input type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 17 November 1998	Accession Number 203485
C. ADDITIONAL INDICATIONS (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States) Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC).	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable) The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	

<input checked="" type="checkbox"/> For receiving Office use only This sheet was received with the international application Jared McRae PCT/International Appl Processing Div. (703) 305-3639	<input type="checkbox"/> For International Bureau use only This sheet was received by the International Bureau on: Authorized officer
--	---

ATCC Deposit No. 203485**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

NORWAY

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

AUSTRALIA

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

FINLAND

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

UNITED KINGDOM

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

Page 2**ATCC Deposit No. 203485****DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

SWEDEN

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

NETHERLANDS

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

593

Applicant's or agent's file reference number	PA106PCT	International application	UNASSIGNED
---	----------	---------------------------	------------

INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>121</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT Further deposits are identified on an additional sheet <input type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 18 June 1999	Accession Number PTA-252
C. ADDITIONAL INDICATIONS (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC).	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	

<p>For receiving Office use only</p> <p><input checked="" type="checkbox"/> This sheet was received with the international application</p> <p>Authorized officer Jeryl McDowell PCT/International Appl Processing Div. (703) 305-3839</p>	<p>For International Bureau use only</p> <p><input type="checkbox"/> This sheet was received by the International Bureau on:</p> <p>Authorized officer</p>
---	--

ATCC Deposit No. PTA-252**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

NORWAY

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

AUSTRALIA

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

FINLAND

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

UNITED KINGDOM

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

Page 2

ATCC Deposit No. PTA-252

DENMARK

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

SWEDEN

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

NETHERLANDS

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

596

Applicant's or agent's file reference number	PA106PCT	International application	UNASSIGNED
---	----------	---------------------------	------------

INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>121</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT Further deposits are identified on an additional sheet <input type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 18 June 1999	Accession Number PTA-253
C. ADDITIONAL INDICATIONS (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC).	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	

<p>For receiving Office use only</p> <p><input checked="" type="checkbox"/> This sheet was received with the international application</p> <p><u>Jerry McDowell</u> Authorized officer PCT/US00/05882, Appl Processing Div. (703) 305-3639</p>	<p>For International Bureau use only</p> <p><input type="checkbox"/> This sheet was received by the International Bureau on:</p> <p>Authorized officer</p>
--	--

ATCC Deposit No. PTA-253**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

NORWAY

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

AUSTRALIA

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

FINLAND

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

UNITED KINGDOM

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

Page 2**ATCC Deposit No. PTA-253****DENMARK**

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

SWEDEN

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

NETHERLANDS

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

599

Applicant's or agent's file reference number	PA106PCT	International application	UNASSIGNED
--	----------	---------------------------	------------

INDICATIONS RELATING TO A DEPOSITED MICROORGANISM

(PCT Rule 13bis)

A. The indications made below relate to the microorganism referred to in the description on page <u>121</u> , line <u>N/A</u>	
B. IDENTIFICATION OF DEPOSIT Further deposits are identified on an additional sheet <input type="checkbox"/>	
Name of depositary institution American Type Culture Collection	
Address of depositary institution (including postal code and country) 10801 University Boulevard Manassas, Virginia 20110-2209 United States of America	
Date of deposit 22 December 1999	Accession Number PTA-1081
C. ADDITIONAL INDICATIONS (leave blank if not applicable) This information is continued on an additional sheet <input type="checkbox"/>	
D. DESIGNATED STATES FOR WHICH INDICATIONS ARE MADE (if the indications are not for all designated States)	
Europe In respect to those designations in which a European Patent is sought a sample of the deposited microorganism will be made available until the publication of the mention of the grant of the European patent or until the date on which application has been refused or withdrawn or is deemed to be withdrawn, only by the issue of such a sample to an expert nominated by the person requesting the sample (Rule 28 (4) EPC).	
E. SEPARATE FURNISHING OF INDICATIONS (leave blank if not applicable)	
The indications listed below will be submitted to the International Bureau later (specify the general nature of the indications e.g., "Accession Number of Deposit")	

<p>For receiving Office use only</p> <p><input checked="" type="checkbox"/> This sheet was received with the international application</p> <p>Authorized officer PCT/International Appl Processing Div. (703) 305-3639</p>	<p>For International Bureau use only</p> <p><input type="checkbox"/> This sheet was received by the International Bureau on:</p> <p>Authorized officer</p>
--	--

ATCC Deposit No. PTA-1081**CANADA**

The applicant requests that, until either a Canadian patent has been issued on the basis of an application or the application has been refused, or is abandoned and no longer subject to reinstatement, or is withdrawn, the Commissioner of Patents only authorizes the furnishing of a sample of the deposited biological material referred to in the application to an independent expert nominated by the Commissioner, the applicant must, by a written statement, inform the International Bureau accordingly before completion of technical preparations for publication of the international application.

NORWAY

The applicant hereby requests that the application has been laid open to public inspection (by the Norwegian Patent Office), or has been finally decided upon by the Norwegian Patent Office without having been laid open inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Norwegian Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Norwegian Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on the list of recognized experts drawn up by the Norwegian Patent Office or any person approved by the applicant in the individual case.

AUSTRALIA

The applicant hereby gives notice that the furnishing of a sample of a microorganism shall only be effected prior to the grant of a patent, or prior to the lapsing, refusal or withdrawal of the application, to a person who is a skilled addressee without an interest in the invention (Regulation 3.25(3) of the Australian Patents Regulations).

FINLAND

The applicant hereby requests that, until the application has been laid open to public inspection (by the National Board of Patents and Regulations), or has been finally decided upon by the National Board of Patents and Registration without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art.

UNITED KINGDOM

The applicant hereby requests that the furnishing of a sample of a microorganism shall only be made available to an expert. The request to this effect must be filed by the applicant with the International Bureau before the completion of the technical preparations for the international publication of the application.

Page 2

ATCC Deposit No. PTA-1081

DENMARK

The applicant hereby requests that, until the application has been laid open to public inspection (by the Danish Patent Office), or has been finally decided upon by the Danish Patent office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the Danish Patent Office not later than at the time when the application is made available to the public under Sections 22 and 33(3) of the Danish Patents Act. If such a request has been filed by the applicant, any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Danish Patent Office or any person by the applicant in the individual case.

SWEDEN

The applicant hereby requests that, until the application has been laid open to public inspection (by the Swedish Patent Office), or has been finally decided upon by the Swedish Patent Office without having been laid open to public inspection, the furnishing of a sample shall only be effected to an expert in the art. The request to this effect shall be filed by the applicant with the International Bureau before the expiration of 16 months from the priority date (preferably on the Form PCT/RO/134 reproduced in annex Z of Volume I of the PCT Applicant's Guide). If such a request has been filed by the applicant any request made by a third party for the furnishing of a sample shall indicate the expert to be used. That expert may be any person entered on a list of recognized experts drawn up by the Swedish Patent Office or any person approved by a applicant in the individual case.

NETHERLANDS

The applicant hereby requests that until the date of a grant of a Netherlands patent or until the date on which the application is refused or withdrawn or lapsed, the microorganism shall be made available as provided in the 31F(1) of the Patent Rules only by the issue of a sample to an expert. The request to this effect must be furnished by the applicant with the Netherlands Industrial Property Office before the date on which the application is made available to the public under Section 22C or Section 25 of the Patents Act of the Kingdom of the Netherlands, whichever of the two dates occurs earlier.

What Is Claimed Is:

1. An isolated nucleic acid molecule comprising a polynucleotide having a nucleotide sequence at least 95% identical to a sequence selected from the group consisting of:
- 5 (a) a polynucleotide fragment of SEQ ID NO:X or a polynucleotide fragment of the cDNA sequence included in the related cDNA clone, which is hybridizable to SEQ ID NO:X;
- (b) a polynucleotide encoding a polypeptide fragment of SEQ ID NO:Y or a polypeptide fragment encoded by the cDNA sequence included in the related cDNA clone, which is hybridizable to SEQ ID NO:X;
- 10 (c) a polynucleotide encoding a polypeptide fragment of a polypeptide encoded by SEQ ID NO:X or a polypeptide fragment encoded by the cDNA sequence included in the related cDNA clone, which is hybridizable to SEQ ID NO:X;
- 15 (d) a polynucleotide encoding a polypeptide domain of SEQ ID NO:Y or a polypeptide domain encoded by the cDNA sequence included in the related cDNA clone, which is hybridizable to SEQ ID NO:X;
- (e) a polynucleotide encoding a polypeptide epitope of SEQ ID NO:Y or a polypeptide epitope encoded by the cDNA sequence included in the related cDNA clone, which is hybridizable to SEQ ID NO:X;
- 20 (f) a polynucleotide encoding a polypeptide of SEQ ID NO:Y or the cDNA sequence included in the related cDNA clone, which is hybridizable to SEQ ID NO:X, having biological activity;
- (g) a polynucleotide which is a variant of SEQ ID NO:X;
- 25 (h) a polynucleotide which is an allelic variant of SEQ ID NO:X;
- (i) a polynucleotide which encodes a species homologue of the SEQ ID NO:Y;
- (j) a polynucleotide capable of hybridizing under stringent conditions to any one of the polynucleotides specified in (a)-(i), wherein said polynucleotide does not hybridize under stringent conditions to a nucleic acid molecule having a nucleotide
- 30

sequence of only A residues or of only T residues.

2. The isolated nucleic acid molecule of claim 1, wherein the polynucleotide fragment comprises a nucleotide sequence encoding a protein.

5

3. The isolated nucleic acid molecule of claim 1, wherein the polynucleotide fragment comprises a nucleotide sequence encoding the sequence identified as SEQ ID NO:Y or the polypeptide encoded by the cDNA sequence included in the related cDNA clone, which is hybridizable to SEQ ID NO:X.

10

4. The isolated nucleic acid molecule of claim 1, wherein the polynucleotide fragment comprises the entire nucleotide sequence of SEQ ID NO:X or the cDNA sequence included in the related cDNA clone, which is hybridizable to SEQ ID NO:X.

15

5. The isolated nucleic acid molecule of claim 2, wherein the nucleotide sequence comprises sequential nucleotide deletions from either the C-terminus or the N-terminus.

20

6. The isolated nucleic acid molecule of claim 3, wherein the nucleotide sequence comprises sequential nucleotide deletions from either the C-terminus or the N-terminus.

7. A recombinant vector comprising the isolated nucleic acid molecule of claim 1.

25

8. A method of making a recombinant host cell comprising the isolated nucleic acid molecule of claim 1.

30

9. A recombinant host cell produced by the method of claim 8.

10. The recombinant host cell of claim 9 comprising vector sequences.

11. An isolated polypeptide comprising an amino acid sequence at least
5 95% identical to a sequence selected from the group consisting of:

(a) a polypeptide fragment of SEQ ID NO:Y or of the sequence encoded by the cDNA included in the related cDNA clone;

(b) a polypeptide fragment of SEQ ID NO:Y or of the sequence encoded by the cDNA included in the related cDNA clone, having biological activity;

10 (c) a polypeptide domain of SEQ ID NO:Y or of the sequence encoded by the cDNA included in the related cDNA clone;

(d) a polypeptide epitope of SEQ ID NO:Y or of the sequence encoded by the cDNA included in the related cDNA clone;

15 (e) a full length protein of SEQ ID NO:Y or of the sequence encoded by the cDNA included in the related cDNA clone;

(f) a variant of SEQ ID NO:Y;

(g) an allelic variant of SEQ ID NO:Y; or

(h) a species homologue of the SEQ ID NO:Y.

20 12. The isolated polypeptide of claim 11, wherein the full length protein comprises sequential amino acid deletions from either the C-terminus or the N-terminus.

25 13. An isolated antibody that binds specifically to the isolated polypeptide of claim 11.

14. A recombinant host cell that expresses the isolated polypeptide of claim 11.

30 15. A method of making an isolated polypeptide comprising:

(a) culturing the recombinant host cell of claim 14 under conditions such that said polypeptide is expressed; and

(b) recovering said polypeptide.

5 16. The polypeptide produced by claim 15.

17. A method for preventing, treating, or ameliorating a medical condition, comprising administering to a mammalian subject a therapeutically effective amount of the polypeptide of claim 11 or the polynucleotide of claim 1.

10

18. A method of diagnosing a pathological condition or a susceptibility to a pathological condition in a subject comprising:

(a) determining the presence or absence of a mutation in the polynucleotide of claim 1; and

15 (b) diagnosing a pathological condition or a susceptibility to a pathological condition based on the presence or absence of said mutation.

19. A method of diagnosing a pathological condition or a susceptibility to a pathological condition in a subject comprising:

20 (a) determining the presence or amount of expression of the polypeptide of claim 11 in a biological sample; and

(b) diagnosing a pathological condition or a susceptibility to a pathological condition based on the presence or amount of expression of the polypeptide.

25 20. A method for identifying a binding partner to the polypeptide of claim 11 comprising:

(a) contacting the polypeptide of claim 11 with a binding partner; and

(b) determining whether the binding partner effects an activity of the polypeptide.

30

21. The gene corresponding to the cDNA sequence of SEQ ID NO:Y.

22. A method of identifying an activity in a biological assay, wherein the method comprises:

- 5 (a) expressing SEQ ID NO:X in a cell;
(b) isolating the supernatant;
(c) detecting an activity in a biological assay; and
(d) identifying the protein in the supernatant having the activity.

10 23. The product produced by the method of claim 20.

SEQUENCE LISTING

<110> Craig Rosen,
Steve Ruben

<120> Human Cancer Associated Gene Sequences and Polypeptides

<130> PA106PCT

<140> Unassigned

<141> 2000-03-08

<150> 60/124,270

<151> 1999-03-12

<160> 1694

<170> PatentIn Ver. 2.0

<210> 1

<211> 556

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (546)

<223> n equals a,t,g, or c

<400> 1

```
gaagagagac tgggttattc ctcccatcag ctgcccagaa aatgaaaaag gccatttcc 60
taaaaaacctg gtccagatca aatccaacaa agacaaagaa ggcaagggtt tctacagcat 120
cactggccaa ggagctgaca caccctgtg tgggtgtcttt attattgaaa gagaaacagg 180
atggctgaag gtgacagagc ctctggatag agaacgcatt gccacataca ctctcttctc 240
tcacgctgtg tcatccaacg ggaatgcagt tgaggatcca atggagattt tgatcacggg 300
aaccgatcag aatgacaaca agcccgaatt caccaggag gtctttaagg ggtctgtcat 360
ggaagggtgct cttccaggaa cctctgtaat ggaggtcaca gccacagacg cggacgatgg 420
atgtggaaca cctacaatgc cgccatcgct tacaccatcc tcagcccaag atccctgagc 480
tccctgacaa aaatatgttc accattaaca ggaacacagg rgtcatcagt gttgtcacca 540
cttggnnttg ccgaga 556
```

<210> 2

<211> 2662

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (2662)

<223> n equals a,t,g, or c

<400> 2

```
ggctgtggga actcctgggg gaggtggagg tggagccgta ccaggtattt cagccatgtc 60
ccgcggwgat ctgwgccaga gagccaagga tttgagtaaa cggagcttct caagtcagcg 120
gccaggcatg gaacggcaga atcggcgccc tggcccaggg ggcaaggctg gcagcagtgg 180
cagcagcagt ggaggaggcg gtgggkgtcc tggaggaagg accgggccag gacgaggcga 240
caagaggagc tggccctctc ccaagaaccg aagtcgtcct ccagaggarc gtcccccggy 300
gcttcccctg cctccccac ctcccagcag ttctgctgct tccgcctgga ccaagttatc 360
cacagcaacc ctgctggcat ccaacargct ctggcccagc ttagtarccg tcaarggagt 420
gtaactgcac caggggggtca tccaaggcac aagcctgggc ctcccccaagc ccctcagggc 480
ccctctccta ggcccccaac ccgatacgag cccagagggg tcaacagcgg cctcagttct 540
gacccccact ttraggagcc gggggccaatg gtgagagggg tgggtgggac tcctcgggac 600
tctgcccggg ttagtccctt tccccctaaa cgctcgggagc ggcctcccag aaaaccagag 660
ctgctacagg aggaatcttt gccacctcct catagctctg gattcttggg ctctaagcct 720
gagggcccag gccctcaggc agagtccaga gatacaggca cagaggccct gacccctcac 780
atctggaacc gttacatac tgccactagc cgaaagagtt accggcccag ctccatggag 840
ccttggaatg agcccctgag tccttttgag gatgtggctg gcacagaaat gagtcaagt 900
gacagtgggg tggacctgag tggggattct caggtgtcat caggtccctg cagccagcga 960
agttcccctg atggaggact caagggggca gcagagggac cccccaagag gcctggaggc 1020
tcctcaccct tgaatgctgt tccttgtgag ggtccacctg gctctgaacc tcctaggaga 1080
ccaccacctg cccccacga tggggacaga aaggagctgc cccgggagca gcctctgccc 1140
cctggcccca ttggcacaga acgatcacag crtacagacc gaggcacaga gcctggcccc 1200
attcggccat cccatcgacc tggccccca gtccagttg gcactartga caaggactca 1260
gacttacgcc tagtggtagg agacagcttg aaagcagaga aggagctaac agcatcagtc 1320
actgaggcca ttcctgtatc acgagactgg gagctgcttc ccagtgtctg tgctctgct 1380
gagccacaat ccaagaacct ggattctggg cactgtgtcc cggagcccag ctctcaggc 1440
cagcgctgt atcctgaggt tttctatggc agtgtgggc cttccagttc tcagatctct 1500
gggggagcca tggactctca attacatcca aacagtggag gcttccgccc tgggacaccc 1560
tactgcacc cttacagatc acagccccta tactacccc csggcccagc ccctccctca 1620
gcaactgctc ctggggtagc tctcaagggc cagtttctgg atttctccac aatgcaagct 1680
acagagctgg ggaagttgcc ggctggagga gttctctacc ctccaccttc cttcctctac 1740
tctcgggctt tctgccccag tcctttgcct gacacatcgt tgcttcaggt acgccaggat 1800
ctgccatccc cttcggattt ttattctact cctctgcagc ctggtggcca aagtggcttt 1860
ctcccttcag gggtcctgc cagcagatgc ttctacccat ggtagactca cagctgcctg 1920
tgggtgaactt tggtccctg ccgcccagc cactcctgc cccacctccc ctttctctgt 1980
tacctgtggg ccctgctctg cagccccca gcctggctgt gcggcccca cctgctcctg 2040
ctactcgggt gctgccttca cctgccaggc ccttccccgc tagcttgggg cgagcagagc 2100
tgcattccagt ggaactaaag ccgttccagg attatcaaaa actgagcagc aaccttgggg 2160
gacctggatc atcacggact ccccaactg gaaggtoctt ctctggcctc aattcccgtc 2220
tcaaggccac gccttccacc tacagtggag tcttccgcac ccagcgcgtc gacctttacc 2280
agcaggcctc cccaccagat gccctgcgct ggatacctaa gccttgggar cggacagggc 2340
cgccacctcg agaagggccc tcccgacggg cagaggagcc tgggtcccga ggggacaagg 2400
agcctgggtt gccccacccc cgctgagggg gttcctcttg cccctacccc ccggggcttg 2460
tatatagatt ataaatatat aagggggaaa ggggtgggag gggaggggtt gtggggctgg 2520
ggcctcactt cccctcctcc cccttcccct ggtcccctgt ccctggggct gtttgttaaa 2580
aaagagtaat aaaaggattt aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2640
aaaaaaaaaa aaaaaaaaaa tn 2662
```

<210> 3

<211> 338

<212> DNA

<213> Homo sapiens

<400> 3
gtgctttgtg ctttgtgcat gtggtaggca gaacactacc atatgtcccc acatacttac 60
actagacctt ggagcaagag caagaacagc aaaagcacag cgcttttgaa cccaaaagac 120
aagctccctt cttcctgcgt tgtccctcca gctscctctg ctgaccagggt ttagcatcat 180
gtgctctgta aaggaggaat tctggagagt ccagtccatt attacagagc tagtactgaa 240
gggtgagttt ggagttgaag aggcaatgaa attgataact ggacacagaag ccaaataataa 300
gagtattgac taaataatag ctaagtacaa gaacacag 338

<210> 4
<211> 813
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (784)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (787)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (793)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (807)
<223> n equals a,t,g, or c

<400> 4
aattcggcac gagccacctt gacctcctaa agtgctagga ttacaggcat gagccactgt 60
accatacccc tgggaggggt ttgaagagtg acatgttatg atttaggttt tagcacaacc 120
ccctcagacc actctgtgga gaacagactg tcagggaacg tgggtggagg cagagagacc 180
agaaagattc caggaggaca gatgtggtgg gacaagggtg gggagacact gaagccaagg 240
ccctgatcac ccctcctcac agctccagcc tctcaactyc agcctctctc acttattggt 300
tccatgtttg tccatcatga gcctcctcaa caagcccaag agtgagatga ccccagagga 360
gctgcagaag cgagaggagg aggaatttaa caccgggtcca ctctctgtgc tcacacagtc 420
agtcaagaac aatacccaag tgctcatcaa ctgccgcaac aataagaaac tcctgggccg 480
cgtgaaggcc ttcgataggc actgcaacat ggtgctggag aacgtgaagg agatgtggac 540
tgaggtagcc aagagtggca agggcaagaa gaagtccaag ccagtcaaca aagaccgcta 600
catctccaag atgttcctgc gcggggactc agtcatcgtg gtcctgcgga acccgctcat 660
cgccggcaag taggggccgc ctgtctgttg acagaactca ctctctgtc ctatgaagac 720
cgctgccatt ggtgttgaga ataataaagc tctgtgtttt tttctaaaaa aaaaaaaaaa 780
aaanytnccg gcngaagctt tttcccntta ggg 813

<210> 5

<211> 901
 <212> DNA
 <213> Homo sapiens

 <220>
 <221> misc feature
 <222> (838)
 <223> n equals a,t,g, or c

 <220>
 <221> misc feature
 <222> (846)
 <223> n equals a,t,g, or c

 <220>
 <221> misc feature
 <222> (870)
 <223> n equals a,t,g, or c

<400> 5
 gcccgaaatgg cgcccgacaa gsgcccgggc gctggacctc ggtcgcgagc tgccatggcc 60
 cagtggagga agaagaaagg gctccggaag cgccgaggcg cggcctccca ggcccgcggc 120
 agcaactcgg aggacggcga gtttgagatc caggcggaag atgacgcccg ggcccggaag 180
 ctgggacctg gaagacccct gccacacctc cccacctcgg aatgcacctc ggatgtggag 240
 ccggacaccc gggagatggg gcgtgcccag aacaagaaga agaagaagtc tggaggcttc 300
 cagtccatgg gcctgagcta cccggtgttc aaaggcatca tgaagaaggg gtacaagggtg 360
 ccaacaccca tccagaggaa gaccatcccc gtgatcttgg atggcaagga cgtggtggcc 420
 atggcccggg cgggcagtgg caagacagcc tgcttctctc tcccaatgtt cgagcggctc 480
 aagaccaca gtgcccagac cggggccccg gcctcatcct ctgcgccgacc cgagarctgg 540
 ccctgcagac cctgaagtwc actaaggagc taggcaagtt cactggcctc aagactgccc 600
 tgatcctggg tggagacagg atggaagacc agtttgacgc cctgcacgaa aatcccagaca 660
 taattattgc cagccccgga cgggtgggtg atgtggctgt ggaaatragc ctgaagctgc 720
 agagtgtgga atacgtrgtg ttcgatgaag ctgaccggct ttttraaatg ggtttcgcag 780
 agcagctgca ggagatcatc gcccgctctc ccgggggcca ccagacggtg ctgttctncg 840
 ccacgntgcc caaactgctg gtggaatttn cccgggctgg cctcacggag cccgtgctca 900
 t 901

<210> 6
 <211> 731
 <212> DNA
 <213> Homo sapiens

 <220>
 <221> misc feature
 <222> (106)
 <223> n equals a,t,g, or c

<400> 6
 ggcacgagcg agctcagagt gtgcccgctg cgccgcccgt gtccgtacct gccgcccgcg 60
 ccaccgccac catgcccaac ttcgccggca cctggaagat gcgcanagcg agaatttcga 120
 cgagctgctg aaggcactgg gtgtgaacgc catgctgagg aaagtggccg tagcggctgc 180

```

gtccaagccg cacgtggaga tccgccagga cggggatcag ttctacatca agacatccac 240
cacggtgcmc accactgaga tcaacttcaa ggctcgagaa ggctttgagg aggagaccgt 300
ggacggacgc aagtgcagga gtttagccac ttgggagaat gagaacaaga tccactgcac 360
gcaaactctt cttgaagggg acggcccca aacctactgg acccgtgagc tggccaacga 420
tgaacttata ctgacgtttg gcgccgatga cgtggtctgc accagaattt atgtccgaga 480
gtgaaggcag ctggcttgct cctactttca ggaagggatg caggctcccc tgaggaatat 540
gtcatagtgc tgagctgcca gtggaccgcc cttttcccct accaatatta ggtgatcccc 600
ttttcccat gacaatgttg tagtgctccc caccaccacc cccagggcct tgggtgcctct 660
tgtatcccta gtgctccata gtttggcatt tgcacggttt cgaagtcatt aaactgggta 720
gacgtgtctc a                                     731

```

<210> 7

<211> 2774

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (2652)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2698)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2714)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2756)

<223> n equals a,t,g, or c

<400> 7

```

ggcagagtca cttttgagta tttcagcctc ttcattgaatc tatctccctc tctttgattt 60
catgtaatct ctccctaaat atttctttgc atatgtgggc aagtgtacgt gtgtgtgtgt 120
catgtgtggc agaggggctt cctaaccctt gcctgatagg tgcagaacgt cggctatcag 180
agcaagcatt gtggagcggc tmcttatgcc aggctgccat gtgagatgat ccaagaccaa 240
aacaaggccc tagactgcag taaaaccag aactcaagta gggcagaagg tggagggtc 300
atatggwtg aaggcccaaa gtataagaca gatggtttga gacttgagac ccgaggacta 360
agatggaaaag cccatgttcc aagatagata gaagcctcag gcctgaaacc aacaaaagcc 420
tcaagagcca agaaaacaga ggggtggcctg aattggaccg aagcctgagt tggatggaag 480
tctcaaggct tgagttagaa gtcttaagac ctgggacagg acacatggaa ggcctaagaa 540
ctgagacttg tgacacaagg ccaacgacct aagattagcc cagggttgta gctggaagac 600
ctacaacca aggatggaag gccctgttca caaagcctac ctatgatgat agaggaccca 660
agcgaaaaag gtatctcaag actaacggcc ggaatctgga ggcccatgac ccagaaccca 720
ggaaggatag aagcttgaag acctgggaa atcccaagat gagaacccta aacctacct 780
ctttctatt gtttacactt cttactctta gatatttcca gttctcctgt ttatctttaa 840

```

```

gcctgattct tttgagatgt actttttgat gttgccggtt accttagat tgacagtatt 900
atgcctgggc cagtcttgag ccagctttta atcacagctt ttacctatgt gttaggctat 960
agtgttttgt aaacttctgt ttctattcac atcttctcca cttgagagag acaccaaagt 1020
ccagtcagta tctaactctg cttttgttaa cttccctcag gacgagacat tcatataggt 1080
gatactgtat ttcagtcctt tcttttgacc ccagaagccc tagactgaga agataaaatg 1140
gtcagggtgt tgggraaaaa aaagtgccag gctctctaga gaaaaatgtg aagagatgct 1200
ccaggccaat gagaagaatt agacaagaaa tacacagatg tgccagactt ctgagaagca 1260
cctgccagca acagcttcct tctttgagct taggtgagca ggattctggg gtttgggatt 1320
tctagtgatg gttatggaaa gggtagctgt gcctgggaca aagcgagggt ccaaggggac 1380
agcctgaact ccctgctcat agtagtggcc aaataatttg gtggactgtg ccaacgctac 1440
tcctgggttt aataccatc tctaggctta aagatgagag aacctgggac tgttgagcat 1500
gtttaatact ttccttgatt tttttcttcc tgttatgtg ggaagttgat ttaaagtact 1560
gataatgtgt atgaaagcac tgtaaaacat aagagaaaaa ccaattagtg tattggcaat 1620
catgcagtta acatttgaaa gtgcagtgt aattgtgaag cattatgtaa atcaggggtc 1680
cacagttttt ctgtaagggg tcaaatcata aatactttag actgtgggcc atatggtttc 1740
tggtacatat ttgtttttta aacaacgttt ttataagggtc aaaatcattc ttagtttttg 1800
agccaattgg atttggcctg ctgttcatag cttaccaccc cctgatgtat tattgttat 1860
tcagagaaaa tttctgaata ctactagttt ccttttctgt gcctgtccct gtgctaggca 1920
ctaaaaatgc aatgattatt gatattctag tgacctgaaa aaaaatagtg aatgtgcttt 1980
gtaaactgta aagcacttgt attctactgt gataagcgtt gtggatacaa agaaaggagc 2040
aagcataaaa aagtgtctt tcaaaaggat atagtactat gcagacacaa ggaattgttt 2100
gataaatgaa taaattatat gtatatgtga ggccaatttg tgtttgctgc tctggtaatt 2160
ttgagtaaaa atgcagtatt ccaggatatca gaaacgaaaa cacatggaaa ctgcttttaa 2220
actttaaaa atactgaaaa cataagggtac taagcttggt gtggtcacct ataagtgtcc 2280
agataccatg ctgggtgcta gagctaccaa agggggaaaa gtattctcat agaacaaaaa 2340
atttcagaaa ggtgcatatt aaagtgtctt gtaaaactaa gcatgataca aatgtcaatg 2400
ggctacatat ttatgaatga atgaatggat gaatgaatat taagtgcctc ttacatacca 2460
gctattttgg gtactgtaaa atacaagatt aattctccta tgtaataaga ggaaagttaa 2520
tcctctatac tattcagatg taaggaaatga tatattgctt aatttttaac aatcaagact 2580
ttactggtga ggttaagtta aattattact gatacatttt tcccaggtaa ccaggaagag 2640
ctagtatgag gnaatgaakt aatarcttar acccaagtgc ccaagatcgg ccgaaccngg 2700
ccgcctccta gganggattc ccccccgaag gggccccaag ccttacgcgt ggccanggcg 2760
gacggtccaa aggc 2774

```

<210> 8

<211> 2613

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (896)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1246)

<223> n equals a,t,g, or c

<400> 8

tcgaccacg cgtccgccca cgcgtccgtg gcgaacgagg ttatcaagtg caaggctgca 60

gttgcttggg aggctggaaa gcctctctcc atagaggaga tagaggtggc acccccaaag 120
gctcatgaag ttcgaatcaa gatcattgcc actgcggttt gccacaccga tgcctatacc 180
ctgagtggag ctgacctga gggttgtttt ccagtgatct tgggacatga aggtgctgga 240
attgtggaaa gtgttggtga gggagttact aagctgaagg cgggtgacac tgtcatccca 300
ctttacatcc cacagtgtgg agaatgcaaa ttttgtctaa atcctaaaac taacctttgc 360
cagaagataa gagtcactca agggaaagga ttaatgccag atggtaccag cagatttact 420
tgcaaaggaa agacaatttt gcattacatg ggaaccagca cattttctga atacacagtt 480
gtggctgata tctctgttgc taaaatagat cctttagcac ctttggataa agtctgcctt 540
ctaggttggt gcatttcaac cggttatggg gctgctgtga aactgccaa gttggagcct 600
ggctctgttt gtgccgtctt tggctctggg ggagtcggat tggcagttat catgggctgt 660
aaagtggctg gtgcttccc gatcattggg gtggacatca ataaagataa atttgcaagg 720
gccaaagagt ttggagccac tgaatgtatt aaccctcagg attttagtaa acccatccag 780
gaagtgtctc ttgagatgac cgatggagga gtggactatt cctttgaatg tattggtaat 840
gtgaagggtc tgagagcagc acttgaggca tgtcacaagg gctggggcgt cacgtncgtg 900
gttggagtag ctgcttcagg tgaagaaatt gccactcgtc cattccagct ggtaacaggt 960
cgcacatgga aaggcactgc ctttggagga tggagagtgt tagaaagtgt cccaaagttg 1020
gtgtctgaat atatgtccaa aaagataaaa gttgatgaat ttgtgactca caatctgtct 1080
tttgatgaaa tcaacaaagc ctttgaactg atgcattctg gaaagagcat tcgaactgtt 1140
gtaaagattt aattcaaaag agaaaaataa tgtccatcct gtcgtgatgt gataggagca 1200
gcttaacagg cagggagaag cgccctcaac ctcacagcct cgtagnrctt cacagctact 1260
ccagaaaata gggttatgtg tgtcattcat gaatctctat aatcaaggac aaggataatt 1320
cagtcatgaa cctgttttct ggatgctcct ccacataaat aattgctagt ttattaagga 1380
atattttaac ataataaaag taatttctac atttgtgtgg aaattgtctt gttttatgct 1440
gtcatcattg tcacgggttg tctgccatt atcttcattc tgcaagggaa agggaaagga 1500
agcagggcag tgggtgggtg ctgaaacctc agaaacataa cggtgaactt ttaagggtct 1560
cagtcgccgt tgattaaaga acagatccta gccatcagtg acaaagttaa tcaggaccca 1620
agtctgcttc tgtgatatta tctttaaggg aggtactgtg ccttgttcat acctgtacct 1680
caaattccta ggatggcatc tgcccttcag ggggcactaa aatgtattat tgaaacagca 1740
ttctgggctt aaataggtgt atgtatgtgt tgggtgtgac tgtactattt ctagtatagt 1800
gaactacata ctgaatatcc aagttctcag cacctacttt tgtcaaactt taacattttg 1860
ccacttcgag atcacattgc cattcctccc ctccagaggt aacaattatc cacaatttga 1920
tgtttatcat tctgtgttg ttgtactttc actgtgtata acctaaacca tctactcttt 1980
agtactgttt tatatatatt taagcctcat acttgctcat tctacagctt ttttactca 2040
ttattgtata attatatctg aagctctcgt tcattaattt tagtcctgtg tagcagaatt 2100
caattacggg aactaccata atttatctgt tctccagttg aaggcatgaa gttgttgcca 2160
gtttctgtat tataacactg tagtggaaca ttcttctgca ttgggctcwc tgcgtgttac 2220
ctaagacgta tcacagaata aacacattta gccttataga cattgccaaa ttgctcttca 2280
aagtaaatgt gagtttttgt gaattacatg agtatggaat ggtgttttat tatgacttta 2340
gtttgcattt tcctcaattc tcgttaaata cttcattcta atggacattt tattgtgaag 2400
aacctgttca tatcctgtgc tcaactttgt attgaattat ttttctctga ataattttta 2460
ggagttcttt tattctagac atcaatcatt tgcagtttt atatgttgca aatatcttct 2520
agtctatctt gtgacttttc tttttacttt atggatattt gttgaataaa gttttaatgt 2580
agtcacataa aaaaaaaaaa aaaaaaaaaa aaa 2613

<210> 9

<211> 1101

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (730)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (983)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1055)

<223> n equals a,t,g, or c

<400> 9

```

gtcggcacgc ccttcggggac gagctggagg cagagcgtga gtacaaagtg atcggcctcg 60
gccgcacgca gtagccccc tactccccgg ccaagtcagg gcctccctct tcccgcggag 120
tcgcaaccac gggtagctcg tgtaggtaac ggcaggcca ggccctccgca tgagcgagg 180
ccccccgcgc gacctgaat ggcccgggcg cgcgcggctg tgtgggagtt gtagtcctcc 240
gtccccgtcc gcgcggactc cgtttcccggt ggtgccccgg gcggcccgt tccggcgag 300
ttagttacga gtcggcgac gcggcctcg tccgggtgac tttgcggacc atggagggcg 360
gcttcggctc cgatttcggg ggctccggca gcgggaagct ggaccagggt ctcataatgg 420
agcaggtgaa agtgagatc gccgtggcca acgcgcagga gctgctgcag aggatgacgg 480
acaagtgttt ccggaagtgt atagggaaac ctgggggctc cctggacaac tccgagcaga 540
agtgcacgc catgtgcatg gaccgctaca tggacgcctg gaacaccgtg tctcgcgcct 600
acaactcgc gctgcagcgg gaacgagcca acatgtgacc ggcgagcgcg ggccacccca 660
ccctgttcat ttccataaac gtgctttgag aggcgggggtc cgcagtgtacg tactgcctgc 720
ccggggcttn aggagggtgg caccggtgct gggacasacg ggactgtgtc ctcgccaccc 780
cccgcctgc cccctgccag ccagtgcagy ttggatctcg ggggtgtggg gccctgtgcc 840
ttcctgaagt gctggcagcc agtggcacct ccttcaggcm tttggggkat tcccctagt 900
tgcccaagtc agcctcatat tctgggcgga cagcttgtct ggacttcgga gttgggggtg 960
gtcagacacc acaggagctg tcnacctctg cggtatggga aataaattgg tggaggacgg 1020
agaaaaacct ctttatttcc ctcctgaggg gtctntggga agaggtgacg cgtgtccctg 1080
gaaccccgag tcggagggtc t 1101

```

<210> 10

<211> 1373

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1364)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1373)

<223> n equals a,t,g, or c

<400> 10

```

ggattccccg gtcgaccac gcgtccgagc catcattgcc aagaccttca agggccgagg 60

```

```

gatcacgggg gtagaagata aggagtcttg gcatgggaag cccctcccca aaaacatggc 120
tgagcagatc atccaggaga tctacagcca gatccagagc aaaaagaaga tcctggcaac 180
ccctccacag gaggacgcac cctcagtggg cattgccaac atccgcatgc ccagcctgcc 240
cagctacaaa gttggggaca agatagccac ccgcaaggcc tacgggcagg cactggccaa 300
gctgggccaat gccagtgacc gcatcatcgc cctggatggg gacaccaaaa attccacctt 360
ctcggagatc ttcaaaaagg agcaccggga ccgcttcacg gagtgctaca ttgctgagca 420
gaacatggtg agcatcgcgg tgggctgtgc caccgcgaac aggacggtgc ctttctgcag 480
cacttttgca gccttcttca cgcgggcctt tgaccagatt cgcatggccg ccatctccga 540
gagcaacatc aacctctgcg gctcccactg cggcgtttcc atcgggggaag acgggccctc 600
ccagatggcc ctagaagatc tggctatgtt tcggtcagtc cccacatcaa ctgtctttta 660
cccaagtgat ggcgttgcta cagagaaggc agtggaaacta gccgccaata caaagggtat 720
ctgcttcacg cggaccagcc gccagaaaa tgccatcatc tataacaaca atgaggactt 780
ccaggctcga caagccaagg tggctcctgaa gagcaaggat gaccagggtga ccgttatcgg 840
ggctgggggtg accctgcacg aggccttggc cgctgccgaa ctgctgaaga aagaaaagat 900
caacatccgc gtgctggacc cttcaccat caagcccctg gacagaaaac tcattctcga 960
cagcgctcgt gccaccaagg gcaggatcct caccgtggag gaccattatt atgaagggtg 1020
cattggtgag gctgtgtcca gtgcagtagt gggcgagcct ggcactactg tcaccacct 1080
ggcagttaac cgggtaccaa gaagtgggaa gccggctgag ctgctgaaga tgtttggtat 1140
cgacagggat gccattgcac aagctgtgag gggcctcacc accaaggcct agggcgggta 1200
tgaagtgtgg ggcgggggtc tatacattcc tgagattctg ggaaagggtg tcaaagatgt 1260
actgagagga ggggtaaata tatgttttga gaaaaatgaa aaaaaaaaaa aaaaaaaaaa 1320
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aan 1373

```

<210> 11

<211> 3804

<212> DNA

<213> Homo sapiens

<400> 11

```

tcgaccacag cgtccgcaaa gctgaagtcg gctaggtttg caaagctgtg ggctgagcac 60
tcaggcaatc acactctcag aaactgcggc ggctctggac tgcagcctcc caaggctcca 120
tgccagacaa agcatgcgtg tcacacttgc tacaatagcc tggatggttt cttttgtctc 180
caattattca cacacagcaa atattttgcc agatatcgaa aatgaagatt tcatcaaaga 240
ctgcgttcga atccataaca agttccgac agaggtgaaa ccaacagcca gtgatatgct 300
atacatgact tgggaccag cactagccca aattgcaaaa gcatgggcca gcaattgcc 360
gttttcacat aatacacggc tgaagccacc ccacaagctg cacccaaact tcacttact 420
gggagagaac atctggactg ggtctgtgcc cattttttct gtgtcttccg ccatcacaaa 480
ctggtatgac gaaatccagg actatgactt caagactcgg atatgcaaaa aagtctgtgg 540
ccactacact caggttgttt gggcagatag ttacaaagtt ggctgcgcag ttcaattttg 600
ccctaaagtt tctggctttg acgctcttcc caatggagca cattttatat gcaactacgg 660
accaggaggg aattacccaa cttggccata taagagagga gccacckca gtgcctgcc 720
caataatgac aagtgttttg acaatctctg tgttaaccga cagcgagacc aagtcaaacg 780
ttactactct gttgtatata caggctggcc catatatcca cgtaacagat acacttctct 840
ctttctcatt gttaattcag taattctaata actgtctgtt ataattacca ttttggtaca 900
gcacaagtac cctaatttag ttcttttgga ctaatacaat tcaggaaaga aaaaacccaa 960
aaaccaacct cattcacata tggctttttt tttaaccaat aacaattagg tgtacttcta 1020
ttttaaaaca ttccagaaaa aaatatatgt tatagcaata ctcttactca aaagaagaaa 1080
tttcctaact ctatcagata aactcatctt tagtataaat aagcattatt tgcagggtgc 1140
cacagggtga cttttagtaa gtaacctaac ccatgtttca gcttctaata ctgcaaaatg 1200
agcarggtac agtagcacat ttttaggtga ttcttagtaa ctccagtagc cttcattagt 1260
taaaaacatt attatttttt gcatgctgct tcgactctaa atatctggtt ttccctgtct 1320

```

```
ttttggttta ctacttcccc agattcagaa cagaggagta actaggggat ctgatttttag 1380
aggccttaat tttctgttca tggactgtta aaagtaaaac caaactttca aaagggataa 1440
acctaaatat ttacttggtta tcattagaga gggaacatca aatgctggga catcattact 1500
aaccaatagc atcagacact ggatttaatg gataatcaca atggtcgtaa tgtatacaaa 1560
gacatatata ccackttcta gtataaattt ttcaaaaaat acaataataa tataatttat 1620
aaagaacact cttctatgaa caaccaccac caccaaaaaa gaaaaagccc tcagaaaatt 1680
tctcacaaat aaggcaacta atgcctgata tctcaaaatc ctttacaaaa ggagatagtt 1740
ctagtcaagg agttttgggt atgttacttt ttttcttctt ttttcttttc atctgcctcc 1800
atcttaagtg caatttcttc agctgtaaga gctcccagtt tcttattctt tgctttctta 1860
accttttctt tgatgctggc cacatcaatt ttagtttcag tagaagctag acaaattaaa 1920
agcacaaacac atgtaatact ttagatttta ccaagtaaaa caaagaatat atgtttaaca 1980
aagaatatat gttaaaggca gtttaacttc gagtattctt ataattgaat aattgaaagr 2040
tgatcacagt ataaaaatata aaaacacttg cctaaagcag ttgaaaaatt cttcagatta 2100
agataaaaaca aatcataaaa tactttatat attagtacaa gtatacataa aaatggcmta 2160
aatggcataa ttgaaccaat tactggattc aactatatta agactatttc cttaaatcct 2220
acttcagact aaattatttt acctacattc ttttccatat tttggaactt ctgagtcatt 2280
attttccayc ttgcacatta aaataattta aaattacatg tatcccttct caataagttt 2340
aatcagctaa ccctaagcta gaggtcaaaa tctacttcct ctaatatcaa aacgaaaatt 2400
taaagttttc caaatattaa ttcaatatta attgaatatt caatgaattc atttaattgt 2460
agattaattc attgaatatt aattcratga atgactaatt aatagtattt taacaagatt 2520
ttggtatatt taacaacatt ttggtataaa agacaataat ttgagagtgt gtggaagtc 2580
ccctaataga agccaactat ctaatcaatg ccaaaagtgt gaacaaaata gagaaaggaa 2640
gcagtgaaaa agaattgcaac ttttctttac cattcaaaagt acaggatcac agcataaaaag 2700
aatcataaga taaaacatca aactaccag caacctgaga agcacagagt gttaaagcct 2760
ccaccgtgtg gagaaactaa attagggtaa ctagctattg agtatattga gtaccttcaa 2820
agcactcaac tgacagggtt tacagactgg aaattataat acttatgaca tttctacctt 2880
ttatataaacc aataatctac catagaatgt agtattytta aagctattaa caagcaatat 2940
attaaaataa taatgtatta tatctgtttc tgaccagtc tatgtacaat attgctggtg 3000
agccctctcc cttcagtggtg tcaactgttg actttggagg gttacttttag gaagaggata 3060
agtgttacca caggggaaaa aaatgcagaa gaggatgcat cagaagaaat ggcatgacaa 3120
tgttttctct tagtgtcttt taaatactag gttagtgcga aagtgatttc tgccatttaa 3180
aaaccacaat cactttcgca ctaatagctc ctgaataaga cctgtcagca tccttttagtc 3240
taaggtgatg agaaatccat gttaccgata tagaagccaa actctaagcc aagatcacat 3300
aaagagaaga aaaagtacaa cttctgataa ttctctttg agaggcatga cagcagagct 3360
cagggatctt cttgcatttc tacagaagat gcactggctg ccctgggttt gtatctttca 3420
caacaaagag tcttttccaa gcacagacca gaggtcagga gaggactgtc aatccagttt 3480
gcactgaaat aggcattagc tgcctctaaa ttataaatta tctcagccat cccttgctct 3540
taggrttagt aattaatgaa atgctaagag aactgatgaa aagatacaac tgtttcttaa 3600
aaagattcag acaaatattat tatgggttta ctttctctaa ttaataaaga cttttacatc 3660
atagaaagca ttaccttcct taggtttcac aattggtttt tccttaggtg gaataaatgc 3720
tttgtttctt tctcttgctc tcttactgat ggcttctgct tgtttagcct acattaataa 3780
ataaaaaata tatcagttaa atgt 3804
```

<210> 12
<211> 2157
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (806)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (846)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1517)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2110)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2116)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2137)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2150)

<223> n equals a,t,g, or c

<400> 12

gcgcacgggt	cactcccgc	gtatattaag	gcgccggcga	kcgcggcctg	aggctgctcc	60
cggacaagg	caacgagcg	ttcgtttgga	cttctcgact	tgagtgcccg	cctccttcgc	120
cgccgcctct	gcagtcctca	gcgcagtcct	tccacaggag	ccagcatact	tcctgaacat	180
ggagagtgt	gttcgccgct	gcccattctt	atcccagagc	ccccaggcct	ttctgcagaa	240
agcaggcaaa	tctctgttgt	tctatgcccc	aaactgcccc	aagatgatgg	aagttggggc	300
caagccagcc	cctcgggcat	tgtccactgc	agcagtacac	taccaacaga	tcaaagaaac	360
ccctccggcc	agtgagaaa	acaaaactgc	taaggccaag	gtccaacaga	ctcctgatgg	420
atcccagcag	agtccagatg	gcacacagct	tccgtctgga	caccccttgc	ctgccacaag	480
ccagggcact	gcaagcaaat	gccctttcct	ggcagcacag	atgaatcaga	gaggcagcag	540
tgtcttctgc	aaagccagtc	ttgagcttca	ggaggatgtg	caggaaatga	atgccgtgag	600
gaaagagggt	gctgaaacct	cagcaggccc	cagtgtgggt	agtgtgaaaa	ccgatggagg	660
ggatcccagt	ggactgctga	agaacttcca	ggacatyatg	caaaagcaaa	gaccagaaa	720
agtgtctcat	cttcttcaag	ataacttgcc	aaaatctgtt	tccacttttc	agtatgatcg	780
tttctttgag	aaaaaaattg	atgagnaana	agaatgacca	cacctatcga	gtttttaaaa	840
ctgtgnaacc	ggcagacaca	catcttcccc	atggcagatg	actattcaga	ctccctcatc	900
acaaaaaagc	aagtgtcagt	ctggtgcagt	aatgactacc	taggaatgag	tcgccacca	960
cgggtgtgtg	gggcagttat	ggacactttg	aaacaacatg	gtgctggggc	aggtgggtact	1020
agaaatattt	ctggaactag	taaattccat	gtggacttag	agcgggagct	ggcagacctc	1080

```

catgggaaag atgccgcact cttgttttcc tcgtgctttg tggccaatga ctcaaccctc 1140
ttcacccctgg ctaagatgat gccaggctgt gagatttact ctgattctgg gaaccatgcc 1200
tccatgatcc aagggttcg aaacagccga gtgccaaagt acatcttccg ccacaatgat 1260
gtcagccacc tcagagaact gctgcaaaga tctgaccctc cagtcccca gattgtggca 1320
tttgaaactg tccattcaat ggatggggcg gtgtgcccac tgggaagagct gtgtgatgtg 1380
gcccattgagt ttggagcaat caccttcgtg gatgagggtcc acgcaggggg ctttatgggg 1440
ctcgaggcgg agggattggg gatcgggatg gagtcatgcc aaaaatggac atcatttctg 1500
gaacacttgg caaagcnttt ggttgtkttg gaggtacat cgccagcacg agttctctga 1560
ttgacaccgt acggctcctat gctgctggct tcatcttcac cacctctctg ccacccatgc 1620
tgctggctgg agccctggag tctgtgcgga tcctgaagag cgctgaggga cgggtgcttc 1680
gccgccagca ccagcgcaac gtcaaactca tgagacagat gctaattgat gccggcctcc 1740
ctgttgtcca ctgcccagc cacatcatcc ctgtgcgggt tgcagatgct gctaaaaaca 1800
cagaagtctg tratgaacta atgagcagac ataactcta cgtgcaagca atcaattacc 1860
ctacggtgcc ccggggagaa gagctcctac ggattgcccc caccctcac cacacacccc 1920
agatgatgaa ctacttcctt gagaatctgc tagtcacatg gaagcaagtg gggctgggaa 1980
ctgaagcctc attccttcag ctggagtggc aatttcttgc arggagggcc aytgcatttg 2040
aagtgatgag tgaaagagag aagtyctatt tttcttcagg gttttgaggc aagtttgggt 2100
attctggttn agggcntgag gcattggacc ttcattnttt ttcaatttan accccag 2157

```

<210> 13

<211> 1117

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1102)

<223> n equals a,t,g, or c

<400> 13

```

ggcagagcct ggaactccgt gagctggaag gaacagattt aatatctagg ggctgggtat 60
ccccacatca ctcatattggg gggctcaagg acccgggcaa tatagtattc tgctcagtgt 120
ctggagatca tctaccagc ctggggcttc tgggacaggc gaggaccac ggaccctgga 180
agagctggtc caggggactg aactcccggc atctttacag agcagagcat gatcacattc 240
ctgccgctgc tgctggggct cagcctgggc tgcacaggag caggtggctt cgtggcccat 300
gtggaaagca cctgtctgtt ggatgatgct gggactccaa aggatttcac atactgcatc 360
tccttcaaca aggatctgct gacctgctgg gatccagagg agaataagat ggccccttgc 420
gaatttgggg tgctgaatag cttggcgaat gtccctctcac agcacctcaa ccaaaaagac 480
accctgatgc agcgcttgcg caatgggctt cagaattgtg ccacacacac ccagcccttc 540
tggggatcac tgaccaacag gacacggcca ccatctgtgc aagtagccaa aaccactcct 600
tttaacacga gggagcctgt gatgctggcc tgctatgtgt ggggettcta tccagcagaa 660
gtgactatca cgtggaggaa gaacgggaag cttgtcatgc ctcacagcag tgcgcacaa 720
actgccagc ccaatggaga ctggacatac cagaccctct cccatttagc ctttaaccccc 780
tcttacgggg acacttacac ctgktgtgta gagcacattg gggctcctga gcccatcctt 840
cgggactgga cacctgggct gtcccccatg cagaccctga aggtttctgt gtctgcagtg 900
actctgggcc tgggcctcat catcttctct cttggtgtga tcagctggcg gagagctggc 960
cactctagtt acactcctct tcctgggtcc aattattcag aaggatggca catttcctag 1020
aggcagaatc tacaacttcc actccaagtg agaaggagrt tcaaactcaa tgrtgstacc 1080
awgcctctcc aacatcttca anccctgac attattt 1117

```

<210> 14

<211> 885
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (869)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (884)
<223> n equals a,t,g, or c

<400> 14
gtggtggctc gtttcatccg catctaccca ctcacctgga atggcagcct gtgcatgcgc 60
ctggagggtgc tgggggtgctc tgtggcccct gtctacagct actacgcaca gaatgagggtg 120
gtggccaccg atgacctgga tttccggcac cacagctaca aggacatgcg ccagctcatg 180
aagggtggtga acgaggagtg cccaccatc acccgcaact acagcctggg caagagctca 240
cgaggcctca agatctatgc catggagatc tcagacaacc ctggggagca tgaactgggg 300
gagcccagtg tccgctacac tgctgggatc catggcaacg aggtgctggg ccgagagctg 360
ttgctgctgc tcatgcagta cctgtgccga gagtaccgag atgggaaccc acgtgtgcgc 420
agctggtgca ggacacacgc atccacctgg tgcctcact gaacctgat ggctacgagg 480
tggcagcgca gatgggctca gagtttgga actgggcgct gggactgtgg actgaggagg 540
gctttgacat ctttgaagat ttcccggatc tcaactctgt gctctgggga gctgaggaga 600
ggaaatgggt cccctaccgg gtccccaaca ataacttgcc catccctgaa cgctaccttt 660
cgccagatgc cacggatatcc acggagggtcc gggccatcat tgccctggatg gagaagaacc 720
ccttcgtgct gggagcaaact ctgaacggcg gcgagcggt agtatcctac ccctacgata 780
tgccccgcac gccttaccca ggagcagctg ctggccgcac catggcagca rcccgggggg 840
aggatgagga cgaggtytcc raggcccang agattccaga ccang 885

<210> 15
<211> 1024
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (938)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1005)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1012)
<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1019)

<223> n equals a,t,g, or c

<400> 15

```
cttgccctttc ccagaaggct gtgcgtgctc ctgcgttyct ccgcgggtctt ccgagcggtc 60
gcgtgaactg cttcctgcag gctggccatg gcgcttcacg ttcccaaggc tccgggcttt 120
gccagatgct caaggaggga gcgaaacact ttccaggatt agaagaggct gtgtatagaa 180
acatacaagc ttgcaaggag cttgccccaa cactcgtac agcatatgga ccaaattggaa 240
tgaacaaaat gggtatcaac cacttgga gaagttgtgt gacaaacgat gcagcaacta 300
ttttaagaga actagaagta cagcatcctg ctgcaaaaat gattgtaatg gcttctcata 360
tgcaagagca agaagttgga gatggcaca actttgttct ggtatttgct ggagctctcc 420
tggaattagc tgaagaactt ctgaggattg gcctgtcagt ttcagaggtc atagaagggt 480
atgaaatagc ctgcagaaaa gctcatgaga ttcttcctaa tttggtatgt tgttctgcaa 540
aaaaccttcg agatattgat gaagtctcat ctctacttcg tacctccata atgagtaaac 600
aatatggtaa tgaagtattt ctggccaagc ttattgctca ggcatgcgta tctatttttc 660
ctgattccgg ccatttcaat gttgataaca tcagagtttg taaaattctg ggctctggta 720
tcagttcctc ttcagtattg catggcatgg tttttaagaa ggaaaccgaa gtgatgtaac 780
atctgtcaaa gatgcaaaaa tagcagtgtc ctcttgcct tttgatggca tgataacaga 840
aactaaggga acagtgttga taaagactgc tgaagrattg atgaatttta gtaagggagr 900
agaaacctca tggrrgcaca agtcaaagct attgctgnta ctggtgcaat gtcgagtaca 960
ggtggcaagt ggcagacatg gtctcatatg caataaatta attcntgtag gnggtaacnc 1020
aaat 1024
```

<210> 16

<211> 545

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (40)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (45)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (403)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (476)

<223> n equals a,t,g, or c

<220>

<221> misc feature
<222> (507)
<223> n equals a,t,g, or c

<400> 16
cccgaactcac tacccccccc ctccccccgc ctgccggccn ccggnccgga attccccgggt 60
cgaccacgc gtccggagag gagccccagc cttgggattc ccaagtgtt tcattcagtg 120
atcaggactg aacacagagg actcaccatg gagtttgggc tgagctggat tttccttgct 180
gctatttttaa aaggtgtcca gtgtgagggtg cagctggtgg agtctggggg aggcttggtg 240
aagcctgggg ggtcccttag actctcctgt gcagcctctg gattcacttt cagtaacgcc 300
tggtatgagct ggggccgcca ggctccaggg aaggggctgg agtgggttgg ccgtattaaa 360
agcaaaactg atggtgggac aacagactac gctgcaccgc tgnaaaggca gattcaccat 420
ctcaagagat gattcaaaaa acacgytgta tytgcaaatg aacagcctga aaaccngagg 480
acacagccgt gtattactgt accacangac ccctaattac tatgatagta rtgcaaaaag 540
ctttt 545

<210> 17
<211> 623
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (15)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (613)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (616)
<223> n equals a,t,g, or c

<400> 17
cggattcgcg gccgntcgac gccgagctgg gtgcgggtgag gcgcgcagat caccgcgggtt 60
cctgggcagg gcacggaagg ctaagcaagg ctgacctgct gcagctcccg cctcgtgcgc 120
tcgccccacc cggccgccgc ccgagcgctc gagaaagtcc tctcgggaga agcagcgccct 180
gttccccggg cagatccagg ttcaggctcct ggctataagt caccatggca cagcaagctg 240
ccgataagta tctctatgtg gataaaaact tcatcaacaa tccgctggcc caggccgact 300
gggctgcaa gaagctggta tgggtgcctt ccgacaagag tggctttgag ccagccagcc 360
tcaaggagga rgtgggcgaa gagggccatcg tggagctggt ggagaatggg aagaagggtga 420
aggtgaacaa ggatgacatc cagaagatga acccgcccaa gttctccaag gtggaggaca 480
tggcagagct cacgtgcctc aacgaagcct cgggtgttgca caacctcaag gagcgttact 540
actcagggtc catctacgta agtggctgcc gtggcaccgc gcaggctggg tctgagggct 600
ccgaggtggg gngngnggcg ggt 623

<210> 18
<211> 559

<212> DNA
 <213> Homo sapiens

<220>
 <221> misc feature
 <222> (371)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (531)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (544)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (547)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (556)
 <223> n equals a,t,g, or c

<400> 18
 cccacgcgtc cgcccacgcg tccggtgaga taggtaggca agtgtggaca aagataaaac 60
 tgaaaaacca ctgcaaagg tggaggaaga caccataagc cgctgaacta agacaaagtc 120
 attagtaatt ttaaaatgag grtggaatt aactaacaga actgatagga agtgtaaca 180
 tacaacaggg gagtctaaga tggcttccaa ttttactta gaggggtaag ggtaccatta 240
 acttaagatc attaatacag raaaattaat cagatttgga gtttaccaag gtttgctttt 300
 gggtgtaaca atgatatatg ataaaattaa atgrataaat aagtgratgc actggtgaat 360
 taatgagctg ntctcattaa gaccagagta cttatttata acaaaagtaa cttttccctt 420
 tccctgggta catcaaactg tactccacag ataacagaca ccagtgagtt tttcatgggt 480
 aaaaaagccc caactttgac ctataaatgt ggaccaagaa attaaaaataa nctggaacca 540
 gcgngcnacg gtattngga 559

<210> 19
 <211> 1355
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc feature
 <222> (55)
 <223> n equals a,t,g, or c

<220>

<221> misc feature
<222> (1045)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1355)
<223> n equals a,t,g, or c

<400> 19
cagcccatgg tgtcacctcg gccccggaca acaggccccgc cttgggctcc accgnccctc 60
cagtcacaaa tgtcacctcg gcctcaggct ctgcatcagg ctcagcttct actctgggtgc 120
acaacggcac ctctgccagg gctaccacaa cccagccag caagagcact ccattctcaa 180
ttcccagcca cactctgat actcctacca cccttgccag ccatagcacc aagactgatg 240
ccagtagcac tcaccatagc acggtacctc ctctcacctc ctccaatcac agcacttctc 300
cccagttgtc tactgggggtc tctttctttt tctgtcttt tcacatttca aacctccagt 360
ttaattcttc tctggaagat cccagcaccg actactacca agagctgcag agagacattt 420
ctgaaatgtt tttgcagatt tataaacaag ggggttttct gggcctctcc aatattaagt 480
tcaggccagg atctgtggtg gtacaattga ctctggcctt ccgagaaggt accatcaatg 540
tccacgacgt ggagacacag ttcaatcagt ataaaacgga agcagcctct cgatataacc 600
tgacgatctc agacgtcagc gtgagtgatg tgccatttcc tttctctgcc cagtctgggg 660
ctgggggtgc aggtctggggc atcgcgctgc tgggtgctggt ctgtgttctg gttgcgctgg 720
ccattgtcta tctcattgcc ttggctgtct gtcagtgcg ccgaaagaac tacgggcagc 780
tggacatctt tccagcccgg gatacctacc atcctatgag cgagtacccc acctaccaca 840
cccattggcg ctatgtgccc cctagcagta ccgatcgtag cccctatgag aaggtttctg 900
caggtaatgg tggcagcagc ctctcttaca caaaccagc agtggcagcc acttctgcca 960
acttgtaggg gcacgtcgcc cgctgagctg agtggccagc cagtgccatt ccactccact 1020
caggttcttc agggccagag ccctngcacc ctgtttgggc tggtagctg ggagttcagg 1080
tgggctgctc acagctcctt cagaggcccc accaatttct cggacacttc tcagtgtgtg 1140
gaagctcatg tgggccctga ggctcatgcc tgggaagtgt tgtggtgggg gctcccagga 1200
ggactggccc agagagccct gagatagcgg ggatcctgaa ctggactgaa taaaacgtgg 1260
tctccactg aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1320
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaan 1355

<210> 20
<211> 1280
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (1043)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1162)
<223> n equals a,t,g, or c

<400> 20
aattcggcac gagccttacc caggtcctgc tcggggctgg ggagaacacc aaaacaaacc 60

```
tggagagcat cctctcttac cccaaggact tcacctgtgt ccaccaggcc ctgaagggct 120
tcacgaccaa aggtgtcacc tcagtctctc agatcttcca cagcccagac ctggccataa 180
gggacacctt tgtgaatgcc tctcggaccc tgtacagcag cagccccaga gtcctaagca 240
acaacagtga cgccaacttg gagctcatca acacctgggt ggccaagaac accaacaaca 300
agatcagccg gctgctagac agtctgccct ccgatacccg ccttgtcctc ctcaatgcta 360
tctacctgag tgccaagtgg aagacaacat ttgatcccaa gaaaaccaga atggaaccct 420
ttcacttcaa aaactcagtt ataaaagtgc ccatgatgaa tagcaagaag taccctgtgg 480
cccatttcat tgaccaaact ttgaaagcca aggtggggca gctgcagctc tcccacaatc 540
tgagtttggg gatcctggta ccccagaacc tgaaacatcg tcttgaagac atggaacagg 600
ctctcagccc ttctgttttc aaggccatca tggagaaact ggagatgtcc aagttccagc 660
ccactctcct aacactaccc cgcatcaaag tgacgaccag ccaggatatg ctctcaatca 720
tggagaaatt ggaattcttc gatttttctt atgaccttaa cctgtgtggg ctgacagagg 780
accagatctc tcaggtttct gcgatgcagc accagacagt gctggaactg acagagactg 840
gggtggaggc ggctgcagcc tccgccatct ctgtggcccg caccctgctg gtctttgaag 900
tgcagcagcc ctctctcttc rtgctctggg accagcagca caagtccct gtcttcatgg 960
ggcgagtata tgaccccagg gcctgagacc tgcaggatca ggttagggcg agcgctacct 1020
ctccagctc agctctcagt ttnagccctg ctgctgcctg cctggacttg gccctgcca 1080
cctcctgcct caggtgtccg ctatccacca aaagggctcc ctgagggctc gggcaaggga 1140
cctgcttcta ttagcccttc tnccatgccc tgccatgctc tccaaaccac tttttgcagc 1200
tttctctagt tcaagttcac cagactctat aaataaaaac tgacagacca tgaaaaaaaa 1260
aaaaaaaaac tcaagactag                                     1280
```

<210> 21

<211> 1191

<212> DNA

<213> Homo sapiens

<400> 21

```
gcaattcctt ctggcttcct gtgacctcac gcaagaaaag gttgtgtact aaatgaatct 60
gctttaactt gctctccttc ctcggggata acaccttttt aagaaagcct gtcccttacc 120
ttgaagcaca aacatattct cttttttatt ctccaatac cttgaagggt ttcttctgca 180
catgtatttg tttgatctgc cttttgtgcg tggggtggga gttaggtagg aatcttaaag 240
tggagagcca gtttcttccc aaattactga cctaaccat ccttaacccc cagttcaagg 300
ccacctttgt gatagtgaag cttccacatg ctactcagc cccttctgct ctctcttctt 360
ctctactgtg catgtcggct tgtacttttg ccagtttctc taaagacaca accagagtgg 420
ggtggctgtg tgtgcacaac ttcaacttta catgtggggc tgagtcccta tgtgtatat 480
ccttgtgcaa aagcacataa tgtaattgct tatagctttt aaaaaataa ttaatagttt 540
ttcataatca aattttcttg cttttttgtt ttttcaaaa agcatacttt tattgaagaa 600
taaacccctt atatatgtac acttatttat aactatgaac gcctgaacta ggatagaaat 660
gcattgtgta tattacaaaa cataacaaaa ataatagggg tagggagggt cagatgttgg 720
tcaaaggata taaacctgca gttctatgat gaataagttc tggacatctg gaatacagca 780
tggtgactat acttagtaat actatattgt acacttgaag cttactgaaa gagtaaatct 840
caagtgttct caccacacaa acccaaagggt aactatgttc tcaccacaca aacccaaagg 900
gaactatgta ttaattagct tgattgtggg aaccatttca caatgtatac atttgccaaa 960
acattatgtt gtatacctgg aatatataat tttattttatc aattatacct caataaagct 1020
gaaagagggg attactaatt cccacaaaat acagatttaa caaaaacttt tattcaacaa 1080
acagtgtctat gaagttgtaa attggaaaca aaagaaataa aatttcattc acagtcttct 1140
catcaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaactcgtag g 1191
```

<210> 22

<211> 853

<212> DNA

<213> Homo sapiens

<400> 22

```
cttacacagc agcaacagcc tgctacaggg ccacagccat ctctgggagt tagttttgga 60
acgccattcg gctcaggtat tggcactggc ttgcaatcaa gtggccttagg ttcttcaaac 120
cttggaggat ttggaactag ctctgggttt ggatgcagca ccacaggggc ctccacattt 180
ggatttgga caacaaataa accctcagga agtcttagtg caggctttgg cagctcaagt 240
acatctgggt ttaacttcag caatcctggc atcacggcat cagctgggtt gacttttggg 300
gtgtccaatc ctgcctctgc aggttttgga acaggaggac aactccttca gttgaagaaa 360
cctccagctg graacaaaag aggaaaaaga taaacatggg ttgatgtgtt gagagaatcc 420
atagcagcac cggtcattct atgagtctat ttttctaata atgcagtaat taaattgcat 480
cccaggagat ttataaagt ttgatatttt tccctactct ggratttgaa ctttcttcat 540
gtttgccata ctgaacawct tttttcttgt ggaatttaaa gtccagctgt gttttctttt 600
taatttgatt ctgagtgtaa gaaatgttct gattacatca ctgattggta atggttagaa 660
accattaacc taaaacttac tatttaacct agtggttttg ttgatgaggt ttacattatg 720
tgaatacatg cacatttggt tcttatacag gtggtgtgaa ctctagggcc tatactagaa 780
tcaatttggt ccttgtaaaa ggccttttga attatactgc agggcatctt gtgaatatgt 840
atgtaaatat ata 853
```

<210> 23

<211> 474

<212> DNA

<213> Homo sapiens

<400> 23

```
ggcacgagct cgtccggccc gtgggtctga cggcttgagt agcgctaggg agaatccctg 60
caggtaatat ttgacttttg cttcatatta atctgagtgg aaaataaaaag ggccctcttc 120
tcctctcgct tccctgccgg gcaggcgcca tggcggaagc tcggcgacgg gcgcctgcgg 180
agaggcgatg gcagcgggcg aaggctcctc gggcccgcg ggcttgactc tgggcccggag 240
cttctcgaac taccggccct tcgagcccca ggcgttgggc ctgagcccga gctggcggt 300
gacgggcttc tccggcatga agggctgagg ctgcaaggct ccgcagaggc gctgctcaaa 360
ctcctggcgg gactgamgcg gccggacktk cggccccgct gggccggggc ctkgtkkggtk 420
gccargaara agcgtcccag gaagccggcc tgccggcaag agcgggcccc agcc 474
```

<210> 24

<211> 2280

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (13)

<223> n equals a,t,g, or c

<400> 24

```
ctctccccct ccnaccctc ccgtccaag attcgccgc gccgcccgc cagccgcagg 60
agtagccgcc gccggagccg cgcgcaccca tggccgagaa cccagcttg gagaaccacc 120
gcatcaagag cttcaagaac aaggggcgcg atgtggaac aatgcgaaga catagaaatg 180
aagtgcaggt ggaactgcgg aagaacaaaa gagatgaaca cttattgaaa aagagaaatg 240
ttccccaa gaagagtcta gaagattcag atgttgatgc tgattttaaa gcacaaaatg 300
```

taaccctaga agctatatattg cagaatgccca caagtgataa cccagtgggtc caattgagtg 360
ctgtccaggc agcaagaaaa ctgttatcca gtgacagaaa tccaccgatt gatgacttaa 420
taaaatctgg gattttacca attctagtca aatgtctaga aagggatgat aatccttcat 480
tacagtttga agctgcttgg gcattaaacta acatagcatc aggracttct gcacagactc 540
aagctgttgt gcagtctaata gcagtacctc tttttctgag acttcttcgt tcaccacatc 600
agaatgtttg tgaacaagca gtatgggctt tgggaaacat tataggatgat ggtcctcaat 660
gtagagatta tgcatatatca ctgggagttg tcaaacctct tctgtccttc atcagtcctc 720
ccatccccat cacttctcctt cggaacgtca catgggtcat tgtcaatctc tgcaggaata 780
aggatcccc accgcctatg gagacagttc aggagatttt gccagcttta tgtgtcctca 840
tataccatac agatataaac attcttgtag acactgtttg ggctctgtca tacttgacag 900
atggaggtaa tgaacagata cagatgggta ttgattcagg agttgtgccc tttcttggtc 960
cccttctgag ccatcaggaa gtcaaagttc aaacagcagc cctcagagca gttggcaaca 1020
tagtgactgg caccgacgag cagacccagg ttgttctcaa ttgtgatgtc ctgtcacact 1080
tcccaaactc cttatcacac ccaaaagaga agataaataa ggaagcagtg tggttccttt 1140
ccaacataac agcaggcaac cagcaacaag ttcaagctgt aatagatgct ggattaattc 1200
ctatgataat tcatcagctt gctaaggggg actttggaac acaaaaagaa gctgcttggg 1260
caatcagcaa cttacaata agtggcagaa aagatcaggt tgagtacctt gtacagcaga 1320
atgtaatacc accgttctgt aatttactgt cagtgaaga ttctcaagt gttcaggtgg 1380
ttctagatgg tctaaaaaac attctgataa tggccggtga tgaagcaagc acaatagctg 1440
aaataataga ggaatgtgga gggttggaaga aaattgaagt tttacagcaa catgaaaatg 1500
aagacatata taaatttagca ttgaaatca tagatcagta tttctctggt gatgatattg 1560
atgaagatcc ctgcctcatt cctgaagcaa cacaaggagg tacctacaat tttratccaa 1620
cagccaacct tcaaacaaaa gaatttaatt tttaaattca gttgagtgca gcatctttcc 1680
cacattcaat atgaagcacc accagatggc taccaaatga taagaacaac agcaacmaaa 1740
ggctccaaaa cacacatgcc tctttgtttt gatgcttcta aagcaagcca tgtctcagtc 1800
actttgcagt tgccaaaagt cactatcaca tggactgtaa atgcatatgc atgatttcct 1860
aaactgtttt agaactctcc ttaacaatct caactaccct atttttccct gttccctggt 1920
gccacaggct gacaactgca gtctccagtt tagaataaat attccatagt ggtgacatgt 1980
cagctgcccc ctgatactcc tttggaaaat ggtgcgctgt ggatcaagac actttgggtat 2040
gatgcatata caagttggaa gactaaagag gtgcagtggt atctgagcct ccatcattgt 2100
cctccacaaa catattttca tattctttat gtggaagaat agattttaaa gtacaagcca 2160
aatgattttc attggtggaa ctgacacaaa aaaagtaact taaaaacaag aaacttggtt 2220
attgaataaa cagataagtt taaaaaaaaa aaaaactact tcatctacca gtaattgatg 2280

<210> 25

<211> 1061

<212> DNA

<213> Homo sapiens

<400> 25

cgacccggcc cagtgcgcag gcgcgggaaa gttgaactaa taaagtttgt acgagttcag 60
tggaggagac cgcaagttga gtggaggagg cggcgggtgg gccccggacc aggtgcctcc 120
atggcaggct ctgaagagct ggggtctcgg gaagacacgc tgagggtcct agctgccttc 180
cttaggcgtg gtgaggctgc cgggtctcct gttccaactc cacctagaag ccctgccccaa 240
gaagagccaa cagacttctt gagccgcctt cgaagatgtc ttccctgctc cctggggcga 300
ggagcagccc cctctgagtc cctcggcctt tgctctctgc ccatccgccc ctgctatggt 360
ttagagcctg gccagctac tccagacttc tatgttttgg tggccagcg gctggaacag 420
ctggtccaag agcagctgaa atctccgccc agccagaat tacagggtcc cccatcgaca 480
gagaaggaa ccatactgga gaggtgggtg gccctgctgg aggaggaggc agaagtcatt 540
aaccagaagc tggcctcgga ccccgccctg cgcacaagct ggtccgcctg tcctccgact 600
ctttcgcccc cctgggtggag ctgttctgta gccgggatga cagctctcgc ccaagccgag 660

```

catgccccgg gcccccgcct ccttccccgg agccccctggc ccgcctggcc ctagccatgg 720
agctgagccg gcgcgtggcc gggctggggg gcaccctggc cggactcagc gtggagcacg 780
tgcacagctt cacgccctgg atccaggcca cgggggctgg gagggcatcc tggctgtttc 840
acccgtggac ttgaacttgc cattggactg agctctttct cagaagctgc tacaagatga 900
cacctcatgt ccctgccctc ttcgtgtgct tttccaagtc ttctattcc actcagggt 960
gtgggggtgtt ggttgcccta cctgtttttg ccaaaaataa attgttttaa acttttctta 1020
ttaaaaacgt tacaaaaaaa aaaaaaaaam agggggggccg c 1061

```

```

<210> 26
<211> 1572
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc feature
<222> (19)
<223> n equals a,t,g, or c

```

```

<220>
<221> misc feature
<222> (28)
<223> n equals a,t,g, or c

```

```

<220>
<221> misc feature
<222> (1491)
<223> n equals a,t,g, or c

```

```

<220>
<221> misc feature
<222> (1527)
<223> n equals a,t,g, or c

```

```

<220>
<221> misc feature
<222> (1555)
<223> n equals a,t,g, or c

```

```

<400> 26
gtttgtcagt ctcggcgng gcggcgngg tggcgcggc ggcgatccac agtgattcgg 60
ccgccgcgcc ggggggtggg ggggctgcgc gggacttttt tttttttcag actgaccgcg 120
gggcagctgc ggacatgtcg accccggccc ggaggaggct catgcgggat ttcaagcgg 180
tacaagagga cccacctgtg ggtgtcagt gcgcaccatc tgaaaacaac atcatgcagt 240
ggaatgcagt tatatttga ccagaaggga caccttttga agatgggtact tttaaactag 300
taatagaatt ttctgaagaa tatccaaata aaccaccaac tgtaggttt ttatccaaaa 360
tgtttcatcc aaatgtgtat gctgatggta gcatatgttt agatatcctt cagaatcgat 420
ggagtccaac atatgatgta tcttctatct taacatcaat tcagtctctg ctggatgaac 480
cgaatcctaa cagtccagcc aatagccagg cagcacagct ttatcaggaa aacaaacgag 540
aatatgagaa aagagtttcg gccattgttg aacaaagctg gaatgattca taatagacaa 600
ctgggtctgtt aatctttttc atcattgttg tgtataattt acctctcatt agaaaggcta 660
acaaatttta agtgccacag gttttaagga ttctgcagaa aaaaaagaaa aaagtccttc 720

```

```
agtttagaac ctacaaaagc ttgtgtatct tgattaatgt acttttttatt gcatgggtgtg 780
aactaagtta ttgctgcata aatttgtaat atatcctgtt tgtatttttt tccaagtgtg 840
taatgttggg gtggagtttt catgacagaa tatacacatt ttgtaaactct gtactttttt 900
caaatattga atgccttatt ttggaattct ttagattttt aaattggaga aaagcactta 960
aagtttttta tatatgaata ttacatgtaa agctgtttaa atacataact tcagtgaag 1020
agactttgtc acttattttcc ttatgtgtgt aggaggggtt aataagtctc tagctctcca 1080
tctattgata gtttcattta caatttcaaa agaacattct tatattttat caaggaagtc 1140
ttcaaatttg attctaaata gcgattataa tctccaactt tattttgaat gtacctctat 1200
tagtttcaat tgagtaattc tagacataac tggtttgact ctgtccaact ctgtatttag 1260
gccatttggt acagtttctt catgcattac ttactgttaa aactgtacct tttgcgattt 1320
cacagtgggc acttctgcc aagcagaga actgatgcga cttgttttgc tgcttggttag 1380
cactttaaaa aattttttga ttaatgaagg aaagtaaac cataaacatt tgccaaaaat 1440
tcatgcccc aatttaggca atggaattag gttgcattgg gtttgaggaa ngggcacatt 1500
ggggggggga atcttgggg gttaacnttt aaattatttt gggaaaattt acccntttta 1560
tgccatggc ct 1572
```

<210> 27

<211> 2005

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1976)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1977)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1978)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1979)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1986)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1988)

<223> n equals a,t,g, or c

<400> 27

```
gcggacgcgt ggggtcgccma cgcgygcgca agcagcgggt tagtggtcgc gcgcccgcacc 60
tccgcagtc cagccgagcc gcgacccttc cggccgtccc caccaccact cgccgccatg 120
cgctccgcc gcctagcgct gttcccgggt gtggcgctgc ttcttgccgc ggcccgcctc 180
gccgtgcct ccgacgtgct agaactcacg gacgacaact tcgagagtcg catctccgac 240
acgggctctg cgggcctcat gctcgtcag ttcttcgcy cctgggtgtg acactgcaag 300
agacttgca ctagtatga agctgcagct accagattaa aaggaatagt ccattagca 360
aaggttgatt gcaactgcaa cactaacacc tgtaataaat atggagtcag tggatatcca 420
accctgaaga tatttagaga tgggaagaa gcaggtgctt atgatggacc taggactgct 480
gatggaattg tcagccactt gaagaagcag gcaggaccag cttcagtgcc tctcaggact 540
gaggaagaat ttaagaaatt cattagtgt aaagatgcct ctatagtagg ttttttcgat 600
gattcattca gtgaggctca ctccgagttc ctaaaagcag ccagcaactt gagggataac 660
taccgatttg cacatacgaa tgttgagtct ctggtgaacg agtatgatga taatggagag 720
ggtatcatct tatttcgtcc ttcacatctc actaacaagt ttgaggacaa gactgtggca 780
tatacagagc aaaaaatgac cagtggcaaa attaaaaagt ttatccagga aaacattttt 840
ggtatctgcc ctacatgac agaagacaat aaagatttga tacagggcaa ggacttactt 900
attgcttact atgatgtgga ctatgaaaag aacgctaaaag gttccaacta ctggagaaac 960
agggtaatat tgggtggcaa gaaattcctg gatgctgggc acaaactcaa ctttgctgta 1020
gtagccgca aaacctttag ccatgaactt tctgattttg gcttgagag cactgctgga 1080
gagattcctg ttgttgctat cagaactgct aaaggagaga agtttgtcat gcaggaggag 1140
ttctcgcgtg atgggaaggc tctggagagg ttctgcagg attactttga tggcaatctg 1200
aagagatacc tgaagtctga acctatccca gagagcaatg atgggcctgt gaaggtagtg 1260
gtagcagaga attttgatga aatagtgaat aatgaaaata aagatgtgct gattgaattt 1320
tatgccccct ggtgtggtca ytgtaagaac ctggagccca agtataaaga acttggcgag 1380
aagctcagca aagacccaaa tatcgtcata gccaaagatg atgccacagc caatgatgtg 1440
ccttctccat atgaagtcag aggttttcct accataact tctctccagc caacaagaag 1500
ctaaatccaa agaaatatga aggtggccgt gaattaagtg attttattag ctatctacaa 1560
agagaagcta caaaccccc tgtaattcaa gaagaaaaac ccaagaaga gaagaaggca 1620
caggaggatc tctaaagcag tagccaaaca ccactttgta aaaggactct tccatcagag 1680
atgggaaaaac cattggggag gactaggacc catatgggaa ttattacctc tcagggccga 1740
gaggacagaa tggatataat ctgaatcctg ttaatttttc tctaaactgt ttcttagctg 1800
cactgtttat ggaaatacca ggaccagttt atgtttgtgg ttttgggaaa aattatttgt 1860
gttgggggaa atgttggtgg ggtggggtg agttgggggt attttcta at ttttttgtta 1920
catttggaac agtgacaata aatgagacc ctttaaaaaa aaaaaaaaaa aaaaannng 1980
gggggncnc cagtcccat cgccc 2005
```

<210> 28

<211> 1408

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (11)

<223> n equals a,t,g, or c

<400> 28

```
cccgcagaca ngcaattttc acctgtgagg tccctggtgt ctactacttt gsataccacg 60
ttcactgcaa ggggggcaac gtgtgggttg ctctattcaa gaacaacgag cccgtgatgt 120
acacgtacga cgagtacaaa aagggttcc tggaccaggc atctgggagt gcagtgtgct 180
tgctcaggcc cggagaccgg tgttcctcca gatgccctca gaacaggctg caggactgta 240
```



```

tgccgggcag tatgtccact cctccttttc aggatattta ttgtatccca tgtaaaaaaca 300
aaaaaacaaa aaacaaagaa aagaaagaga ttttatagaa gaaaatgaca caccaaaaaaa 360
tccaaatgaa aaacataatt gcttcaaaac acttacacag ttggaaaagt atatgtaagt 420
gaaaatttgg accattgtgt acaataaaaa actaagatgc atgtttaata ctccacacag 480
cagcctgtaa ttgcgaatga tgggatatag ttatgtatca agtactgaca cttgggttgta 540
cccactggaa tcatattagc tgttttatgt tatatgcttc cacagtaacc tgcttattca 600
gatcagtcaa aatatatcag tatgaaagat catagcta atgaaaggcact cactcatatt 660
gtttacttta aaatatattat aaatatgcct taaagaaata caaatgataa caattacata 720
ccgtattttac ttgcttaatt tcctctgtat ttgtgtagat actttgacat ggaatatatg 780
gtggggagac ccgtagtgtt accgccccag tgggaggggg ccctgggacc ctggtaatgc 840
tttagtcaaa gggatatctc tcttgatca gaggtgtgt cttttagtaa caggagtcct 900
cgtcagaatt gcgtgtctgt tgtctctaaa agaattgggtg aaccaatcgg cttttgtgaa 960
tttattcagt gccttctctg taccaagcac tgggtaaggc acttttgtgg agcattagac 1020
agtaaccctc aaggagctag agaaccgat gggagacatg agcggtaatt aactcacttg 1080
ttccccagag tttctatttg ttttgatttt ctttttctgt gacttatttt cctattttct 1140
ttcctccatg taattttcac tatggcccaa ctaatatata cacctgggaa attacaagga 1200
aaaaaaattc ttcctcta atactttccaa atttgtggaa tatttatttg taatagcagt 1260
tatcagttat gcttatatag cattaataaat tctcctcctt tgactacaca cacaaccaca 1320
gtgtggttct aatcatggag atatcagtaa tttttagtaa ctgarttttg aggacatttc 1380
tctgttttagc atgtatgcaa actggata 1408

```

<210> 29

<211> 917

<212> DNA

<213> Homo sapiens

<400> 29

```

ggcacgagcg aggggaggag ccgctggctc ccagccccgc cgcgatgagc ctcggccgcc 60
tttgccgcct actgaagccg gcgctgctct gtggggctct ggccgcgcct ggctggccg 120
ggaccatgtg cgcgtcccgg gacgactggc gctgtgcgct ccatgcacga kttttccgcc 180
aaggacatcg acgggcacat ggtaaacctg gacaagtacc ggggcttcgt gtgcatcgtc 240
accaacgtgg cctcccagtg aggcaagacc gaagtaaaact aactcagct cgtcgacctg 300
cacgcccgat acgctgagtg tggtttgcg atcctggcct tcccgtgtaa ccagttcggg 360
aagcaggagc cagggagtaa cgaagagatc aaagagttcg ccgcgggcta caacgtcaaa 420
ttcgaatagt tcagcaagat ctgctggaac ggggacgacg cccacccgct gtggaagtgg 480
atgaagatcc aacccaaggg caagggcacg ctgggaaatg ccatcaagtg gaacttcacc 540
aagtctctca tcgacaagaa cggctgcgtg gtgaagcgct acggacccat ggaggagccc 600
ctggtgatag agaaggacct gccccactat ttctagctcc acaagtgtgt ggccccgccc 660
gagcccctgc ccacgcccty ggagccttcc accggcactc atgacggcct gcctgcaaac 720
ctgctggtgg ggcagacccg aaaatccagc gtgcaccccg ccggaggaag gtcccatggc 780
ctgctgggct tggctcggcg cccccacccc tggctacctt gtgggaataa acagacaaat 840
tagcaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 900
aaaaaaaaa aaaaaaa 917

```

<210> 30

<211> 577

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (501)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (534)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (568)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (575)

<223> n equals a,t,g, or c

<400> 30

```
aattcggcac gaggtcatct ggtggaaaag gagactttaa gattgtttag ggctgggcgg 60
ggtgactcac atctgtaatc ccagcacttt gggaggccaa ggcaggcaga acacttgaag 120
gagttcaaga ccagcgtggc caacgtggtg aaccctgtct ctactaaaaa tacaaaaatt 180
gtttagctct gtttttcata atagaaatag aaaaggtaaa attgcttttc ttctgaaaag 240
aacaagtatt gttcatccaa gaagggtttt tgtgactgaa tcagcagtgc ctgccctagt 300
catagctgtg cttcagaaac ctcagcatga ttagtgttkg agcmmaacaa ggragcaaag 360
caaatwcwgt ttttgaaatt ctatctgttg cttgaactat tttgtaataa ttaaactttg 420
gatgttgaga aatcacaaact ttattggtac acttcattgc aacttgaaat tccatggggtc 480
ttaaagtggag attggaattc naatgggcgg cttttaaaaa gtaattccca accnttaagg 540
ttaaaaccca ggaaattggg gccaatcnaa aaccnng 577
```

<210> 31

<211> 2059

<212> DNA

<213> Homo sapiens

<400> 31

```
tgggagtaaa aatgtgtctt cagagactgt gaacatcacc atcactcaag gtttggcagt 60
gtcaaccatc tcatcattct ttccacctgg gtaccaagtc tctttctgct tggatgatgg 120
actccttttt gcagtggaca caggactata tttctctgtg aagacaaaca ttcgaagctc 180
aacaagagac tggaaggacc ataaatttaa atggagaaag gacctcaag acaaattgacc 240
cccatcccat gggggtaata agagcagtag cagcagcatc tctgaacatt tctctggatt 300
tgcaacccca tcatcctcag gcctctctac aagcagcagg aaacatagaa ctcagagcca 360
gatcccttat ccaactctcg acttttccct ggtctccagt ggaagggaaa agcccatgat 420
cttcaagcag ggaagcccca gtgagtagct gcattccctag aaattgaagt ttcagrgcta 480
cacaacamt tttctgtccc aaccgttccc tcacagcaaa gcaacaatac aggctagggg 540
tgaaggagga gtgcaaaaara gtgtccccac cctcctgccc ccgcaccgt ttgccacccc 600
ttcgggaagac ccagtgtgtg gatgagtatg agtgtgcctg caactgtgtc aatccacagt 660
gagctgtccc cttgggtact tggcctcaac cgccaccaat gactgtggct gtaccacaac 720
cacctgcctt cccgacaagg tgtgtgtcca ccgaagcacc atctaccctg tgggccagtt 780
ctgggaggag ggtgcgatg tgtgcacctg caccgacatg gaggatgccg tgatgggcct 840
ccgcgtggcc cagtgtctcc agaagccctg tgaggacagc tgtcggtcgg gcttcactta 900
```

```
cgttctgcat gaaggcgagt gctgtggaag gtgcctgcca tctgcctgtg aggtgggtgac 960
tggtccaccg cgggggggact cccagtcttc ctggaagagt gtcgggtccc agtgggcctc 1020
cccgagagaac ccctgcctca tcaatgagtg tgtccgagtg aaggaggagg tctttataca 1080
acaaaggaac gtctcctgcc cccagctgga ggccctgtc tgcctcctcg gctttcagct 1140
gagctgtaag acctcagcgt gctgcccagg ctgtcgtgtg gagcgcagtg aggcctgcat 1200
gctcaatggc actgtcattg ggcccgggaa gactgtgatg atcgatgtgt gcacgacctg 1260
ccgctgcatg gtgcaggtgg gggatcatctc tggattcaag ctggagtga ggaagaccac 1320
ctgcaacccc tgccccctgg gttacaagga agaaaataac acaggtgaat gttgtgggag 1380
atgtttgcct acggcttgca ccattcagct aagaggaggga cagatcatga cactgaagcg 1440
tgatgagacg ctccaggatg gctgtgatac tcacttctgc aaggtcaatg agagaggaga 1500
gtacttctgg gagaagaggg tcacaggctg cccacccttt gatgaacaca agtgtctggc 1560
tgaggggagg aaattatga aaattccagg cactgtctgt gacacatgtg aggagcctga 1620
gtgcaacgac atcactgcca ggctgcagta tgtcaagggt ggaagctgta agtctgaagt 1680
agaggtggat atccactact gccaggggcaa atgtgccagc aaagccatgt actccattga 1740
catcaacgat gtgcaggacc agtgctctctg ctgctctccg acacggacgg agcccatgca 1800
gggtggccctg cactgcacca atggctctgt tgtgtaccat gaggttctca atgccatgga 1860
gtgcaaatgc tccccagga agtgagcaa gtgaggctgc tgcagctgca tgggtgcctg 1920
ctgctgcctg ccttgcctga tggccaggcc agagtgtctg cagtcctctg catgttctgc 1980
tcttgtgcc ttctgagccc acaataaagg ctgagctctt atcttgcaaa aaaaaaaaaa 2040
aaaaaaaaa aaaaaaaaaa 2059
```

<210> 32

<211> 549

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (337)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (378)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (497)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (537)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (546)

<223> n equals a,t,g, or c

<400> 32

```

gcagcgaggg agctgctctg ctacgtacga aaccccgacc cagaagcagg tcgtctacga 60
atggttttagc gccaggttcc ccacgaacgt gcggtgcgtg acgggcgagg gggcgccgc 120
tctagaggat ccaagcttac gtacgcgtgc atgcgacgtc atagctcttc tatagtgtca 180
cctaaattca attcactggc cgtcgtttta caacgtcgtg actgggaaaa ccctggcggt 240
acccaactta atcgcccttc agcacatccc cctttcgcca gctggcgtaa tagcgaagag 300
gcccgcaccg attcgccctt tcccaacagt tgcgcancgt gaatggcgaa tggggacgcg 360
ccctgtatgg gcgcgttnaa gcgcggcggg tgtggtggtt acgcgcagtg gaccgcgtac 420
acttgccagc gccctagcgc ccgctccttt cgctttcttc ccttcctttc tcgccacgtt 480
cgccggcttt ccccttnaag ctctaaatcg gtgggctccc tttagggtgtc ctatttngtg 540
ctttanggt                                     549

```

<210> 33

<211> 841

<212> DNA

<213> Homo sapiens

<400> 33

```

gctttgaacc tcaacagcca gctgaacata cccaaagaca caagccaact gaagaaacat 60
atcaccttgc tctgcgatag attatccaaa ggtggccgtc tctgcctaag taccgatgca 120
gcagccccac agaccatggt catgccaggt ggttgacta caatcccaga gtcagaccta 180
gaagaaagat cagtagaaca agactctaca gaactgttta ccaaccacag acatctcact 240
gcagagacac ccaggcctgt ttcacccttc caaggagtct cgggaataatt ccaagtagag 300
ttgtttggtt gagaggaaca tccccatctc aaggccgaac ctgtgtgaac ctcatgccaa 360
gcacagatat arggctggcg caggtgcttc cyaaagctya ccttcctgga gatgacatgc 420
atagaaaagag gggttgggac tttttacttc actaggagaa cttgtaacac catggggaag 480
tcagctgaaa cttgtcttgt tttgccagga aagggaagtag ttgccttttg tcatccatct 540
gctaatagtc acagaataca gtgaaatgac atagttttgg gttagatttt ataatgcaa 600
gattcagatc caaaataatt tcatacccca ttttttcaca gaattcttat atagtaaagt 660
tatcaagttt aataaagcat ctcatgttca aataatatct tggattttat ttataattag 720
agggatttat gagtgattgc tctacattat ttcttcaaag gaaaggaaag gaattgaaga 780
ctttgctact ctctggttaag acttgaatgt gattatttta taaataaaaag aaccactatg 840
a                                             841

```

<210> 34

<211> 863

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (19)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (29)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (44)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (58)

<223> n equals a,t,g, or c

<400> 34

```

accaaaaaag ctttggagnt ttccaaccnc cggtttgcgg ccnngttttt tagaactnag 60
tggaatcccc cgggggcttt caaggaattc ggcacgagtt tgcttaggcg cagacgggga 120
agcggagcca acatgccagt ggcccggagc tggggttggt gcaaaactta tgtgaccccc 180
cggagaccct tcgagaaatc tcgtctcgac caagagctga agctgatcgg cgagtatggg 240
ctccggaaca aacgtgaggt ctggagggtc aaattttacc tggccaagat ccgcaaggcc 300
gcccgggaac tgctgacgct tgatgagaag gacccacggc gtctgttcga aggcaacgcc 360
ctgctgcggc ggctgggtccg cattgggggtg ctggatgagg gcaagatgaa gctggattac 420
atcctggggc tgaagataga ggattttctt gagagacgcc tgcagaccca ggtcttcaag 480
ctgggcttgg ccaagtccat ccaccacgct cgcgtgctga tccgccagcg ccatatcagg 540
gtccgcaagc aggtggtgaa catcccgtcc ttcattgtcc gcctggattc ccagaagcac 600
atcgacttct ctctgcgctc tccctacggg ggtggccgct cgggccgctg gaagaggaag 660
aatgccaaga agggccaggg tggggctggg gctggagacg acgaggagga ggattaagtc 720
cacctgtccc tcctgggctg ctggattgtc tcgttttctt gccaaataaa caggatcagc 780
gctttacaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 840
aaaaaaaaaa aaaaaaaaaa ttt                                     863

```

<210> 35

<211> 1230

<212> DNA

<213> Homo sapiens

<400> 35

```

tgcaggaatt cggcacgagc ccagcgccgc cgccatgtcc tccgggggcta gcgcgagcgc 60
cctgcagcgc ttggtagagc agctcaagtt ggaggctggc gtggagagga tcaaggcttc 120
tcaggcagct gcagagcttc aacagtactg tatgcagaat gcctgcaagg atgccctgct 180
ggtgggtgtt ccagctggaa gtaaccctt cggggagcct agatcctgtg ctttactctg 240
aagactctag gagagaagtt tgctgaggaa tgccttcaag cacaaagtga tgaatgactg 300
ccttcaagtc tcaagaaaac acttttccct aactttttaga gatatttcag ccctttcctg 360
tggcctggtc ctatagccaa aatcacagat attcatgagt ttctacttga gtgagaaaac 420
tgggtgaagg aatagaattt taaatagtaa taactgcttg tttttttgt gcaagtactt 480
ttatacataa gataaacaac aaccttacca ccaaacatac caaaatgcac ctctttcata 540
agtgaattac taagatttct atacctgga tatcatgtat gtttcattta ctggatgttt 600
acatttttagg aaggaaaata gtttgtttta tttaaacaac tgaatactta taaactgttg 660
ttcctggaag ttattttatt cataaaaaat ttgttctttt ctcatgaatt tataattcct 720
aaatgaagac cagaaagtac aaattgctgg gaggaagaat aggctttatt aatcaactga 780
tgtcttgatt tttctaaatg ggaagattgc tttattttta aactaatta tgggagcaga 840
ttcttagcaa acttcttttg aaaagttaat gttatgatgt gcattaggct gcccatcgt 900
gtatataaat gaagcagatt tgatttttgt attcttacgt ttctctgctt tgtagttgtg 960
gctgtactta aagaaataca gaatttcata tatttaaaaa tgtttaaaat gtgaccaca 1020
gaacattgta aatgattaaa aactaacatg aaaatattac aacctaaaag aattcttaac 1080
ttcacaagtg ttttacttcg acgatgtgcc tttgatttaa tttgggacac ttttttagaa 1140
ggatacatta ttcgtgtttg caacggtctt tgaagagctt ggaaataaaa tttctgctta 1200

```

attaatcatt tttctatgac agcaaaaaaa

1230

<210> 36

<211> 640

<212> DNA

<213> Homo sapiens

<400> 36

```
caacccaaat cgctcactat agggaaagct ggtcgcctgc aggtaccggt ccggaattcc 60
cgggtcgacc cacgcgtccg gctgtctgaa gatagatcgc catcatgaac gacaccgtaa 120
ctatccgcac tagaaagttc atgaccaacc gactacttca gaggaacaa atggtcattg 180
atgtccttca ccccggaag gcgacagtgc ctaagacaga aattcgggaa aaactagcca 240
aaatgtacaa gaccacaccg gatgtcatct ttgtatttgg attcagaact cattttggtg 300
gtggcaagac aactggcttt ggcatgattt atgattccct ggattatgca aagaaaaatg 360
aaccctaaaca tagacttgca agacatggcc tgtatgagaa gaaaaagacc tcaagaaagc 420
aacgaaagga acgcaagaac agaataaga aagtcagggg gactgcaaag gccaatgttg 480
gtgctggcaa aaagccgaag gagtaaggt gctgcaatga tgtagctgt ggccactgtg 540
gatttttcgc aagaacatta ataaactaaa aacttcaaaa aaaaaaaaaa aaaaaaaaaa 600
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaagg 640
```

<210> 37

<211> 597

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (10)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (15)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (32)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (556)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (558)

<223> n equals a,t,g, or c

<220>

<221> misc feature
<222> (567)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (590)
<223> n equals a,t,g, or c

<400> 37
ggtgagaccn tctanaatat ggttccccgg gntgccgatt cgccaagggtg ctcgggtcctt 60
ccgaggaagc taaggctgcg ttgggggtgag gccctcactt catccggcga ctagcaccgc 120
gtccggcagc gccagcccta cactcgcccg cgccatggcc tctgtctccg agctcgccctg 180
catctactcg gccctcattc tgcacgacga tgagggtgaca gtcacggagg ataagatcaa 240
tgccctcatt aaagcagccg gtgtaaatgt tgagcctttt tggcctggct tgtttgcaaa 300
ggccctggcc aacgtcaaca ttgggagcct catctgcaat gtagggggccg gtggacctgc 360
tccagcagct ggtgctgcac cagcaggagg tcctgcccc tccactgctg ctgctccagc 420
tgaggagaag aaagtggag caaagaaaga agaatccgag gagtctgatg atgacatggg 480
ctttggtctt tttgactaaa cctcttttat aacatgttca ataaaaagct gaacttttaa 540
aaaaaaaaaa aaaaancncg ggggggnccg ctttaaaggg tccaagttan gtacggg 597

<210> 38
<211> 624
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (79)
<223> n equals a,t,g, or c

<400> 38
ggaccccgtc gccctcctga tgetgctcgt ggacgctgat cagccggagc ccatgcgcac 60
ggggcgcgcg agctcgcgnt cttcctgacc cccgkccctg gggccgaggc gaaggagggtg 120
gaggagacca tcgagggcat gctcctcagg ctggaagagt tttgcagcct ggctgacctg 180
atcaggagtg atacttcaca gatcctggag gaaaacatcc cagtccttaa ggccaaactg 240
acagaaatgc gtggcatcta tgccaaagtg gaccggctag aggccttcgt caagatgggt 300
ggacaccacg tcgccttcct ggaagcagac gtgcttcagg ctgagcggga ccatggggcc 360
ttccctcagg ccctgcggag gtggctggga tccgcaggct cccctccttc aggaacaagt 420
camctgsacc kgtgcccgtg acgtacgagc tgcccacact gtataggacg gaggactatt 480
ttcctgtgga cgccgggkaa gcacagcamc amccccgcac ctgccctcgg cctttgtgag 540
ctttgtggtc ttcccatcag gaacactgga aagtgcacatt gtgtacacgc tgcagcttgg 600
gggttttttc tttgtattgc tgtt 624

<210> 39
<211> 1029
<212> DNA
<213> Homo sapiens

<400> 39
ggccctcga gggatcctct agagcggccg ccgactagtg agctcgtcga cccgggaatt 60

```

cgcgggccgcg tcgacgctca gtcttccacc aaaggccggt cagttctcct gggctccagc 120
ctcctgcaag gactgcaaga rttttcctcc gcagctctga rtctccactt ttttgggtgga 180
gaaaggctgc aaaaagaaaa agagacgcag tgagtgggaa aagtatgcat cctattcaaa 240
cctaattgaa tcgargarcc cagggacaca cgccttcagg ttgtctcarg ggttcataatt 300
tggtgcttag acaaattcaa aatgaggaaa catcggcact tgcccttagt ggccgtcttt 360
tgctcttttc tctcaggctt tcctacaact catgcccagc agcagcaagc agtcattgaa 420
gtcaacaaga gagacatagt cttcctgggt gatggctcat ctgactggg actggccaac 480
ttcaatgcc a tccgagactt cattgctaaa gtcattccaga ggctggaaat cggacaggat 540
cttatccagg tggcagtggc ccagtatgca gacactgtga ggctgaatt ttatttcaat 600
acccatccaa caaaaagggg agtcataacc gctgtgcgga aaatgaagcc cctggamggs 660
tcggccctgt acacgggctc tgctctagac tttgttcgta acaacctatt cacgagtca 720
gccggctacc gggctgccga ggggattcct aagcttttgk tgctgatcac aggtggtaag 780
tccctagatg aaatcagcca gcctgcccag gagctgaaga gaagcagcat aatggccttt 840
gccattggga acaagggtgc cgatcaggct gagctggaag agatcgcttt cgactcctcc 900
ctgggtgttca tcccagctga gttccgagcc gcccattgc aaggcatgct gcctggcttg 960
ctggcacctc tcaggacctt ctctggaacc cctgaagttc actcaaacia aagggatatc 1020
atctttctg 1029

```

<210> 40

<211> 1107

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1098)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1106)

<223> n equals a,t,g, or c

<400> 40

```

tgaatggctt atttaaataa gttggatcta tggactctcc acagcctaga tattatccta 60
ctgaagatgt gcctcgaaag ctggtgagcc acggcaaaaa acccttcagt cagcacgtga 120
gaaaactgcg agccagcatt acccccggga ccattctgat catcctcact ggacgccaca 180
ggggcaaggt gagagtacct gtgcttgggg cgcttcactg cagctgcctg ggggtgcctg 240
tggcaatgcg ttgtcacgct aggtgtactt ttcctttatt tacctatgtt tggggcaagg 300
ggaaatgatc tgcaagatac aacttagttg ttgcaataa gaagtgtaat ccatggtgat 360
ttattagcca ttctctgctg ttgatwatgt tacacatgty catttactca aaaacgtgtt 420
tatgtctgga gtactacctt agtagcttgc tgtggttgct tccagaactg ccgagctgta 480
tacatatata tgtagaaatt tccttaccm aatttagatg cctgtgawtt tawgaatcag 540
aagycagttt taawtgcmga aaacyaatta tttcttttt amcttacaag aggggtgggtt 600
tcctgaagca gctggctagt ggcttattac ttgtgactgg acctctgggtc ctcaatcgag 660
ttcctctacg aagaacacac cagaaatttg tcattgccac ttcaacaaaa atcgatatca 720
gcaatgtaaa aatcccaaaa catcttactg atgcttactt caagaagaag aagctgcgga 780
agcccagaca ccaggaaggt gagatcttcg acacagaaaa agagaaatat gagattacgg 840
agcagcgcaa gattgatcag aaagctgtgg actcacaat tttacaaaa atcaaagcta 900
ttcctcagct ccagggtac ctgcgatctg tgtttgctct gacgaatgga atttatcctc 960
acaaattggg gttctaaatg tcttaagaac ctaattaaat agctgactac aaaaaaaaaa 1020

```


aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa ccccgggggg 1080
gggcccggtt cccatttngc cctttng 1107

<210> 41

<211> 1051

<212> DNA

<213> Homo sapiens

<400> 41

cttggaagtc agtcgtagtc ctgcgagtc cggcgggagc tggaagtgc catccacgac 60
agaacaaata ttcggtgctt ttacctacct acaacgagcg cgagaacctg ccgctcatcg 120
tgtggctgct ggtgaaaagc ttctccgaga gtggaatcaa ctatgaaatt ataatacatg 180
atgatggaag cccagatgga acaagggatg ttgctgaaca gttggagaag atctatgggt 240
cagacagaat tcttctaaga ccacgagaga aaaagttggg actaggaact gcatatattc 300
atggaatgaa acatgccaca ggaaactaca tcattattat ggatgctgat ctctcacacc 360
atccaaaatt tattcctgaa tttatttaga agcaaaagga gggtaatttt gatattgtct 420
ctggaactcg ctacaaagga aatggaggtg tatatggctg ggatttgaaa agaaaaataa 480
tcagccgtgg ggccaatttt ttaactcaga tcttgctgag accaggagca tctgatttaa 540
caggaagttt cagattatac cgaaaagaag ttctagagaa attaatagaa aaatgtgttt 600
ctaaaggcta cgtcttccag atggagatga ttgttcgggc aagacagttg aattatacta 660
ttggcgaggt tccaatatca tttgtggatc gtgtttatgg tgaatccaag ttgggaggaa 720
atgaaatagt atctttcttg aaaggattat tgactctttt tgctactaca taaaagaaag 780
atactcattt atagttacgt tcatttcagg ttaaacaatga aagaagcctg gttactgatt 840
tgtataaaat gtactcttaa agtataaaat ataaggtaag gtaaatttca tgcactcttt 900
tatgaagacc acctatttta tatttcaaat taaataattt taaagttgct ggcctaataa 960
gcaatgttct caattttcgt tttcattttg ctgtattgag acctataaat aaatgtatat 1020
ttttttttgc ataaarwaaa aaaaaaaaac c 1051

<210> 42

<211> 2192

<212> DNA

<213> Homo sapiens

<400> 42

ggcgaacctg gtgatgctgg tgctaaaggc gatgctggtc cccctggccc tgccggaccc 60
gctggacccc ctggcccatc ttgtaatgtt ggtgctcctg gagccaaagg tgctcgcggc 120
aggctggtec cctgggtgct actggtttcc ctgggtgctgc tggccgagtc ggtcctcctg 180
gcccctctgg aaatgctgga ccccctggcc ctccctggtc tgctggcaaa gaaggcgga 240
aaggctcccc tggtgagact ggccctgctg gacgtcctgg tgaagttggt ccccctggtc 300
cccctggccc tgctggcgag aaaggatccc ctgggtgctga tggctcctgct ggtgctcctg 360
gtactcccgg gcctcaaggt attgctggac agcgtgggtg ggtcggcctg cctggtcaga 420
gaggagagag aggttccctt ggtcttccctg gcccctctgg tgaacctggc aaacaaggtc 480
cctctggagc aagtggtgaa cgtgggtccc ctgggtcccat gggccccccct ggattggctg 540
gaccccctgg tgaatctgga cgtgaggggg ctccctggtc cgaagttccc ctggacgaga 600
cggttctcct ggcgccaagg gtgaccgtgg tgagaccggc cccgctggac cccctggtgc 660
tcctgggtgct cctggtgccc ctggccccgt tggccctgct ggcaagagtg gtgatcgtgg 720
tgagactggt cctgctggtc ccgccgggtc tgctggccct gttggcgccc gtggccccgc 780
cggaccccaa ggccccctg gtgacaaggg tgagacaggc gaacagggcg acagaggcat 840
aaagggtcac cgtggcttct ctggcctcca gggctccctg ggcctcctg gctctcctgg 900
tgaacaaggt ccctctggag cctctgggtc tgctgggtcc cgaggtcccc ctggctctgc 960
tggtgctcct ggcaaatgat gactcaacgg tctccctggc cccattgggc cccctggtcc 1020

```

tcgcggtcgc actggtgatg ctggtcctgt tggccccccc ggccctcctg gacctcctgg 1080
tccccctggt cctcccagcg ctggtttcga cttcagcttc ctgccccagc cacctcaaga 1140
gaaggctcac gatggtggcc gctactaccg ggctgatgat gccaatgtgg ttcgtgaccg 1200
tgacctcgag gtggacacca cctcaagag cctgagccag cagatcgaga acatccggag 1260
cccagagggc agccgcaaga accccgcccg cacctgccgt gacctcaaga tgtgccactc 1320
tgactggaag agtggagagt actggattga ccccaaccaa ggctgcaacc tggatgccat 1380
caaagtcttc tgcaacatgg agactggtga gacctgcgtg taccctactc agcccagtgt 1440
ggcccagaag aactggtaca tcagcaagaa cccaaggac aagaggcatg tytggttcgg 1500
cgagagcatg accgatggat tccagttcga gtatggcggc cagggctccg accctgccga 1560
tgtggccatc cagctgacct tcctgcgcct gatgtccacc gaggcctccc agaacatcac 1620
ctaccactgc aagaacagcg tggcctacat ggaccagcag actggcaacc tcaagaaggc 1680
cctgctcctc cagggctcca acgagatcga gatccgcgcc gagggcaaca gccgcttcac 1740
ctacagcgtc actgtcgatg gctgcacgag tcacaccgga gcctggggca agacagtgat 1800
tgaatacaaa accaccaaga cctcccgctt gcccatcatc gatgtggccc ccttggaagt 1860
tggtgccccca gaccaggaat tcggcttcga cgttggccct gtctgcttcc tgtaaactcc 1920
ctccatccca acctggctcc ctcccaccca accaactttc cccccaaccc ggaaacagac 1980
aagcaaccca aactgaaccc cctcaaaagc caaaaaatgg gagacaattt cacatggact 2040
ttggaaaata tttttttcct ttgcattcat ctctcaaact tagtttttat ctttgaccaa 2100
ccgaacatga ccaaaaacca aaagtgcatt caaccttacc aaaaaaaaaa aaaaaaaaaa 2160
actcgggggg ggcccgttac caattggcct aa 2192

```

<210> 43

<211> 353

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (37)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (348)

<223> n equals a,t,g, or c

<400> 43

```

tctctaatac gactcactat agggaaagct gggtacnctg caggtaccgg tccggaattc 60
ccgggtcgac ccacgcgtcc ggtggggcctt caccaagttc aatgctgatg aatttgaaga 120
catggtgggt gaaaagcggc tcatcccaga tggctgtggg gtcaagtaca tccccagtcg 180
tgccctctg gacaagtggc gggccctgca ctcatgaggg cttccaatgt gctgcccccc 240
tcttaatact caccaataaa ttctacttcc tgtccaaaaa aaaaaaaaaa aaaaaaaaaa 300
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaanaa aag 353

```

<210> 44

<211> 3490

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (782)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1311)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2298)

<223> n equals a,t,g, or c

<400> 44

```
acaaaaatatt tacgatacaa gtagcctgcc agtacgggtcc ggaaattccc gggctcgaccc 60
acgcgtccgg tgaaaactgt tgcattatcc ctccatcctg tctggaatac accaggtcaa 120
caccagagat ctcagatcag aatcagagat ctcagagggg aataagttca tcctcatggg 180
atgggtgagg gcaagaaagc ggctgggctc ttggacacct ggttctcaga gaaccctgtg 240
atgatcacc aagccccagg ctgtcttagc ccctggagtt cagaagtcct ctctgtaaag 300
cctgcctccc amtargtcaa gaggaactag agtacctttg gatttatcag gaccctcatg 360
tttaaatggt tatttccctt tgggaaaact tcagaaactg atgtatcaaa tgaggccctg 420
tgccctcgat ctatttccct ctctctctctg acctcctccc aggcactctt acttctagcc 480
gaactcttag ctctgggcag atctccaagc gcctggagtg ctttttagca gagacacctc 540
gttaagctcc gggatgacct tgtaggagat ctgtctccct gtgcctggag agttacagcc 600
agcaagggtgc ccccatctta gagtgtggtg tccaaacgtg aggtggcttc ctagttacat 660
gaggatgtga tccaggaaat ccagtttgga ggcttgatgt gggttttgac ctggcctcag 720
ccttggggct gtttttccct gttgccccgc tctagacttt tagcagatct gcagcccaca 780
gnkctttttt ggaaggagtg gcttctctgca ggtgttccac ctgcyttcgg agcctgccac 840
ccaggccctc agaactgagc cacaggctgc tctggccagg agagaaacag ctctgttgtt 900
ctgcattggg ggaggtacat tcctgcatct tctaccccc tcaaccagga actggggatt 960
tgggatgaga tatggtcaga cttgtagata accccaaaga tgtgaagatc gcttggtgaa 1020
ccattttgaa tgaatagatt gggttccctg ggctccctcc aaacctggcc aagcccagct 1080
tccgaagcag gaaccagcac tgtctctgtg cctgactcac agcatatagg tcaggaaaga 1140
atggagacgg cattcttgga cttcactggg gctgctggat tggatgggaa accttctgga 1200
agaggcagat gggggtcaaa ccaactgcct ggccccagga aggggcatag gtaggtctga 1260
acaactgccg caagaccact acatgactta gggaacttga aaccaactgg nctcatggag 1320
aaaacaaatt tgacttggga aagggtattat gtaggaataa tgtttggact tgatttcccc 1380
acgtcataat gaagaatgga agtttggatc tgctcctcgt caggcgagc atctctgaag 1440
cttggaagc tgtcttccag cagcctcctg ggccctcggg tcctaccggc ttctctgcat 1500
ttggtctgct gatcatgttg ccataatgtg tatggaaagt gtacacattc ttactgggta 1560
aagacgacta ccaggatatct aacttggtta acattgagtt tgtgtgtgtg tgtgtatgtt 1620
tgtgtgtttt gtatattgtt tacattttga gaggtagcat tctgtttcaa atgctttttg 1680
tttttctgac agtattgttg actgggtcat aacattttga gctgtgggtt ggtggatttt 1740
caattttttt ttttaaaggc cattcgctgt gctatcttca aaaccttgag tttggccccc 1800
aatttttggc attcaaatgt ttaaaagcta tttatcttgg tttatacaag tttcctttct 1860
cttctttttg tcatgggtatt ctatttggtc tgcagtttga atgtagagaa agtggtactga 1920
tcccccaagc gttgtctgcc cccactcttt cctccttggg tcccggcatt cttttactgg 1980
gcagtcgagg gcattggagg ggaagtgact gccctcagcc tcaactccctg gggccatgaa 2040
gaaaagctaa acagtctcat ggcattctcag aataatgttg ggtctcccaa gaagaaagg 2100
gtaagaataa cgacatggct gattaggcga ggccaggata gggctaaggc caggattcct 2160
ggctggcacc cagtcacccc ttctcccatc cttccccctc ttcttccaca agtccgcagc 2220
```

```

cgagacactg tagtctccca gccacagtga tgagtgcctt ggagactcca ctgacctcta 2280
gatgaaggcc cctggccntg gttcctgtta attaacctct gggctcttga gtcccccagc 2340
acaaacttct ttcctgtacc ctgcggcttg gggtcacagg gcatgccggg aagccacagc 2400
tgagggggcg agactgaagc agtgctccac ctctccttct ttagctcagg ggttgctggt 2460
ctgtggcagg cgccacgagt ggcccctgtg gctgttctca gtggcagtct cttaagttcc 2520
caccacaggc agctctttat cccctctccc tacttsactc tttctcttgc ctgtgctttt 2580
ggcctcaaac aggcctgctg gtagcgctca gggcgtagg ctacactcct gccctgcctt 2640
tcctgtcttc atggtctgcc agggcatacc ttggggagggt ggaccaaaga cccaggactt 2700
tttgacagtag ccagtcctac ccccagttg tctttttacc aattcagggt gggagagaaa 2760
actgcagcac cccagcatgt gagttactca ggtgttgggg gctagaagggt acagtgcgtt 2820
taaacaacac tcagagctct ggccctaaac ctgtggcccc ccaagtctag gaggctcatc 2880
tcttcctggc agtcatgcgg gcaggagggt ctgaaagggg aaaccctatc agacaactgt 2940
tccccaatct accagccatc tgcaggggtc agtgaccgtg gccctctccc tcctctagaa 3000
tgtgccactt atgaagagtg ccccatgggg aaaaggagac tcagctgtcc cttggcagct 3060
tgtgccagta tcccagggca gaagtttcca caggagcctc ttgcccttgc gcagagccac 3120
tgtgagaggc ggtgggagcc aacacccttg ggggaggggg cagtactgct cggcacatcc 3180
cagcatcagg tcagatcayt gaaattaaaa aatgtgaatt aagttcatat ccaccttttg 3240
gggaagcagg acaaaccacc accccaccaa gtgtgtgact tctccatata cactgacagt 3300
ttccattttt taaatgggaa ttttcaatcc cctgtgcttg tctaacgtct gctttaaaaa 3360
gtttgagacc ctgttactgt ttgaaaatgc atgcatgtta cgatgaatct ccaacctgag 3420
gaaaaaata aaactcaaaa agctttgtgt aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3480
aaaaaacct                                     3490

```

<210> 45

<211> 781

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (750)

<223> n equals a,t,g, or c

<400> 45

```

gtcagatgtt ccttttccca aatcattatt cctttggcca gaaggttgga cttgatacct 60
tccagcagcc tggagcctca tggccaaacc aggtcctcag gcatcccagg atttccaggc 120
atcagatgga gggtaggggc tgcccagcaa atgtcagtgt gtgtcaacat ttactgcagg 180
ttcagagctc cctccagggt ccctgagtag atcatgtgct cctgagagtt ttaagggaaa 240
gccaaagtaa gacgtgatga tgttctaaac ccaagcaatt aataaaygcc acggaaatca 300
gtcattcact taccaagtat ttctctgctt tctgccatgt cacgggsgca tgatccccctg 360
gagattgagg gaaataagat cacaggagct cccagtctga gtgagaaaag gcagctgctc 420
tgtggtactg tgcactggac ctgggaatgg cctaaggaga caagcattga gggctgagct 480
cagaagccag ggagaagagc tcagaacccc aggagaggag ctcagaaccc tgggagagga 540
gctcagaacc ctgggagggc ttggtaacct tcgaggatgt ggccgtggag ttcacccagg 600
aggagtgggc gttgctggac cctgcccata ggacactgta cagggatgtg atgctggaga 660
actgcaggac ctggcctcac targgtgtcg tgtaataaaa cccagtctga tatcccagtt 720
ggamcaagac aagaagktgg tgacagaggn aagaggaatc taccaagcac ctgtccagat 780
t                                             781

```

<210> 46

<211> 1431

<212> DNA

<213> Homo sapiens

<400> 46

gggtcgaccc acgcgtccgc ttcagagaag aatttctctt tagttctttg caagaaggta 60
gagataaaga cactttttca aaaatggcaa tggatatcaga attcctcaag caggcctggg 120
ttattgaaaa tgaagagcag gaatatgttc aaactgtgaa gtcattccaaa ggtgggtccc 180
gatcagcggg gagccccctat cctaccttca atccatcctc ggatgtcgct gccttgcata 240
aggccataat ggttaaagggt gtggatgaag caaccatcat tgacattcta actaagcgaa 300
acaatgcaca gcgtcaacag atcaaagcag catatctcca ggaaacagga aagcccctgg 360
atgaaacact gaagaaagcc cttacagggtc accttgagga ggttggttta gctctgctaa 420
aaactccagc gcaatttgat gctgatgaac ttcgtgctgc catgaagggc cttggaactg 480
atgaagatac tctaattgag attttggcat caagaactaa caaagaaatc agagacatta 540
acaggggtcta cagagaggaa ctgaagagag atctggccaa agacataacc tcagacacat 600
ctggagattt tcggaacgct ttgctttctc ttgctaaggg tgaccgatct gaggactttg 660
gtgtgaatga agacttggct gattcagatg ccagggcctt gtatgaagca ggagaaagga 720
gaaaggggac agacgtaaac gtgttcaata ccattcctac caccagaagc tatccacaac 780
ttcgcagagt gtttcagaaa tacaccaagt acagtaagca tgacatgaac aaagttctgg 840
acctggagtt gaaaggtgac attgagaaat gcctcacagc tatcgtgaag tgcgccacaa 900
gcaaaccagc tttctttgca gagaagcttc atcaagccat gaaaggtggt ggaactcgcc 960
ataaggcatt gatcaggatt atggtttccc gttctgaaat tgacatgaat gatataaaag 1020
cattctatca gaagatgtat ggtatctccc tttgccaaag catcctggat gaaaccaaag 1080
gagattatga gaaaatcctg gtggctcttt gtggaggaaa ctaaacattc ccttgatggt 1140
ctcaagctat gatcagaaga ctttaattat atattttcat cctataagct taaataggaa 1200
agtttcttca acaggattac agtgtagcta cctacatgct gaaaaatata gcctttaaat 1260
catttttata ttataactct gtataataga gataagtcca ttttttaaaa atgttttccc 1320
caaaccataa aaccctatac aagttgttct agtaacaata catgagaaag atgtctatgt 1380
agctgaaaat aaaatgacgt cacaagacaa aaaaaaaaaa aaaaaaaaaa a 1431

<210> 47

<211> 1913

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (43)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1878)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1896)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1905)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1907)

<223> n equals a,t,g, or c

<400> 47

```
cccacgcgtc cggccagctc attgctctta tagcctgtga ggnagraaga aacatttgcy 60
agccaggcta gtgacagaaa tggattcgaa ataycagtgt gtgaagctga atgatgggtca 120
cttcatgcct gtcctgggat ttggcaccta tgcgcctgca gaggttccta aaagtaaagc 180
tytagaggcc rycaaattgg caatwgaagc yggsttcrc catattgatt ctgcwcatkt 240
wtacaataat gaggagcagg ttggactggc catccgaagc aagattgcag atggcagtg 300
gaagagagaa gacatattct acacttcaaa gctttggwgc aattcccatc gaccagagtt 360
ggtccgacca gccttggaag ggtcactgaa aaatcttcaa ttggattatg ttgacctcta 420
ycttattcat tttccagtg  ctgtaaagcc aggtgaggaa gtgatcccaa aagatgaaaa 480
tggaaaaata ctatttgaca cagtggatct ctgtgccacr tgggaggccg tggagaagt 540
taaagatgca ggattggcca agtccatcgg ggtgtccaac ttcaaccrca ggcagctgga 600
gatgatccct aacaagccag ggctcaagta caagcctgtc tgcaaccagg tggagtgtca 660
tccttacttc aaccagagaa aactgctgga tttctgcaag tcaaaagaca ttgttctggt 720
tgcctatagt gctctgggat ccaycgaga agaaccatgg gtggaccga actccccgt 780
gctcttgagg gacccagtc tttgtgcctt ggcaaaaaag cacaagcgaa cccagccct 840
gattgccctg cgctaccagc trcagcgtgg ggttgtggtc ctggccaaga gctacaatga 900
gcagcgcctc agacagaacg tgcaggtgtt tgaattccag ttgacttcag aggagatgaa 960
agccatagat ggcctaaaca gaaatgtgcg atatttgacc cttgatattt ttgctggccc 1020
ccctaattat ccattttctg atgaatatta acatggaggg cattgcatga ggtctgccag 1080
aaggccctgc gtgtggatgg tgacacagag gatggctcta tgctggtgac tggacacatc 1140
gcctctggtt aaatctctcc tgcttgyga yttcagyaag ctacagcwaa gcccattygc 1200
crgaaargaa agacaataat tttgtttttt cattttgaaa aaattaaatg ctctctccta 1260
aagattcttc acctactttc gtctccataa cttctatgtt ttctttcctt ctgacacact 1320
agtgtcccta aattgtgatt tgcctatacg tttagggccg ggggttgaag atgttaacaa 1380
ccatttaaga ttcatttctg cagtgggagt ggggtggagt tcaccctctg ggaaaggggc 1440
aggtgacagg tatttatcag tcagtgcctc tctagctctt gtaggaagaa gcacacgcag 1500
gatggagtct agaggatgag cgatattgac tagcaattca tgggctccct ccagcagtg 1560
gagggtcaga gtttctggag ccttgggagg aggcacccct gtgagggggg gttagggaga 1620
tgggagggca ccaggaaaag tgattagaag tcagggtatg gaaggctaaa taggacagag 1680
tcgagtacat ctctgcttgg aaaaacatat caacaccctt tttttttgaa cattatatct 1740
tgttcataaa agaaaacttt ccacattgtt ttaacaaacc ccacagctgg agagttcagg 1800
cctggaatct ttggatgtgt gccagttca cagattggac cctattggtt tgtggtggg 1860
ccagggcatc caaagacntc attggactaa ttcacnttc ccgnanagc ccc 1913
```

<210> 48

<211> 1761

<212> DNA

<213> Homo sapiens

<400> 48

```
cgaggagctc tgagggtctat gctcagctgt gcaacgtggc tcgcattgag gcagagcggg 60
agggcggggg ccacttccgg ccaggctatg agtatggccc cgggcccgat gacctgcact 120
acagcatcta tggcccagat ggggccccct tctacaacta cctgggcccc gaggacaccg 180
```

```

tccctgagcc tgccttcccc aacacagccg gtcactcagc ggaccgcaca cccatccttg 240
agtctccttt gcagccctca gaactccagc cccactacgt ggccagccat ccagagcccc 300
cagccggctt cgaagggtt caggcggagg agtgcggcat cctgaacggc tgtgagaatg 360
gccgctgtgt gcgcgtgctg gagggtaca cctgtgactg ttttgagggc tccagctgg 420
atgcggccca catggcctgc gtagatgtga atgagtgtga tgacttgaac gggcctgctg 480
tgctctgtgt ccatggttac tgcgagaaca cagagggtc ctaccgctgc cactgctccc 540
cgggatatgt ggctgaggca gggccccccc actgcactgc caaggagtag cagtcagggg 600
tcagtgtggc aactacctgg aaatggcctc cagtcacagg cagggggcctt gaggatgatt 660
tcctagctgg gaagacaccg tgacatcagg ccagagggtt ccaatcagcc ttgcctgctt 720
tcatctctcc cagcttagcc tctggctgta agcttcggtc attgcctcca tgcccttgct 780
tggtcaagc accaccaatc gctttaatgc ttcagccacc gcatgaggcc ctgtccacca 840
cctttcctgg ccttgctatg ggatgcttac caaaggatgg ccctcatcca cctcccaag 900
ctgtgcragc atgcaaggcc ccatggctca cactgcagac acccctttcc agccacaatc 960
caccatcatc ctgacgatcc cacaactggg acagaggcta catctgcctt agggaggtcc 1020
ttcagaatct gtggagcaag aaaggatttg gggaagcttg gggactgact ccagagcccc 1080
ctcctaagaa ccatcaccac cactcagcca atctgttctg ggccttgatt ttgccacacc 1140
tccatcctgt agcccattct ctgaccccaa ggagtggcag aagatccctt cactcagaga 1200
agcaaggctg atattagctt gttgaatgta agagacacaa atgaagaaga acaaagagcc 1260
tgagaaagca gcaagaggac atgatgaaaa atacgtggag ttgatgagaa aggggagcca 1320
aggctttata cgtctaaaga aatatattcag tagctgaatc cgccagtgta tagcctgtgg 1380
gcaccagcag caagggtgc catgggatac agyaccatc tacaagacc tctattacat 1440
aaacactgct tcttacagga aacaaacctc ttctgggatc tccttttgtg aaaaccagtt 1500
tgatgtgcta aaagtaaaaa gtctattttc cagtgtggtc ttgttcagaa gcagccagat 1560
ttccaatggt gtttttcccc tccactcaga aaccctgccc ctttcccttc agaaaacgat 1620
ggcaggcatt cctctgagtt tacaagcaga gactcactcc aaccctaaact agctgggagt 1680
tcagaacat ggtggaataa agaaatgtgc atctgggtcaa aaaaaaaaaa aaaaaaaaaa 1740
aaaaaaaaaa aaaaaaaaaa g 1761

```

<210> 49

<211> 956

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (37)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (352)

<223> n equals a,t,g, or c

<400> 49

```

tgaggagtt cggcacgagg gtatttagag cgcaggntg acgggccgga tcgccttcgc 60
cgccgcccgc ccgcaaacct tcgtgcccgc cccgtcctcg ccccgccctc cgccaccgcc 120
tcggcccgcga gagcttgccc cctccccacc cgcagacatg tccgagtcca agagcggccc 180
cgagtatgct tcgtttttcg ccgtcatggg cgctcgggcc gccatggtct tcagcgccct 240
gggcgtgcc tatggcacag ccaagagcgg taccggcatt gcggccatgt ctgtcatgcg 300
gccggagcag atcatgaagt ccatcatccc agtggcatg gctggcatca tngycatcta 360
cggcctggtg gtggcagtc tcatcgccaa ctccctgaat gacgacatca gcctctacaa 420

```

```

gagcttcctc cagctgggcg ccggcctgag cgtgggcctg agcggcctgg cagccgggctt 480
tgccatcggc atcgtggggg acgtgtggcg gcggggcaac gcccagcagc cccgactatt 540
cgtgggcatg atcctgattc tcattcttcg cgagggtgctc ggccctctacg gtctcatcgt 600
cgccctcatc ctctccacaa agtagaccct ctccgagccc accagccaca gaatattatg 660
traagaccac ccctcctcat cgcccctcca gggccccggc gccccacccc ctagagtgtc 720
ctgtgtatgc ggatgattta gaattgtcat ttctctttac tggatgttta tttataaaga 780
tctggcctgt tcctgctgtc gcggagcggc ccttgtctcc cagctatcta taaccttagc 840
tagagtgtcg ccttgtgggt tcctgttgct gagacttcct ggatggagcc gccctcaccg 900
wmcgkcccgt ggccctgcgc ggagctgtgt ccaataaagt tcttggtatg gaaaaa 956

```

<210> 50

<211> 563

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (510)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (519)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (530)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (558)

<223> n equals a,t,g, or c

<400> 50

```

cggacgcgtg ggcgcctcc gaatccagag aggcgctgct gacaccgccg ccacaccgcc 60
gccacaccgc cgctgcctca gtcatgccga agcacgagtt ctctgtggac atgacctgtg 120
gaggctgtgc tgaagctgtc tctcgggtcc tcaataagct tggaggagtt aagtatgaca 180
ttgacctgcc caacaagaag gtctgcattg aatctgagca cagcatggac actctgcttg 240
caaccctgaa gaaaacagga aagactgttt cctaccttgg ccttgagtag caggggcctg 300
gtccccacag cccacaggat ggaccaaagg gggcaggatg ctgacccctc cgctggcttc 360
cagacagacc tgggacttgg cagtcatgcc gggatgatgg gttcctgcgg agacctcag 420
ttgtcctatt ccttcctagc ttccctgcaa taaaatcaag ctgcttttgt tggaaaaaaa 480
aaaaaaaaaa gggggcgctc aaaaaccaan ttatttcnt gatgaaatcn acctctttgt 540
tcccattcat ccggcctnaa aaa 563

```

<210> 51

<211> 3215

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (3196)

<223> n equals a,t,g, or c

<400> 51

```
gcctcgggtg ggggtgggagc ggggggggaca gtgccccggg aacccgggtg gtcacacaca 60
cgcaactgcgc ctgtcagtag tggacattgt aatccagtcg gcttgttctt gcagcattcc 120
cgctcccttc cctccatagc cacgctccaa accccagggg agccatggcc gggtaaagca 180
agggccattt agattaggaa ggtttttaag atccgcaatg tggagcagca gccactgcac 240
aggaggaggt gacaaacctt ttccaacagc aacacagcca ctaaaacaca aaaaggggga 300
ttgggcggaa agtgagagcc agcagcaaaa actacatttt gcaacttggt ggtgtggatc 360
tattggctga tctatgcctt tcaactagaa aatttctaat attggcaagt cacgttgttt 420
tcaggtccag agtagtttct ttctgtctgc tttaaattggr aacagactca taccacactt 480
acaattaagg tcaagcccag aaagtgataa gtgcagggag gaaaagtgca agtccattat 540
gtaatagtga cagcaaaggg accaggggag aggcattgcc ttctctgccc acagtctttc 600
cgtgtgattg tctttgaatc tgaatcagcc agtctcagat gcccacaaagt ttcggttcct 660
atgagcccgg ggcagatctc gatccccaag acatgtggag gggcagcctg tgcctgcctt 720
tgtgtcagaa aaaggaaaacc acagtgcgcc tgagagagac ggcgattttc gggctgagaa 780
ggcagtagtt ttcaaaacac atagttaaaa aagaaacaaa tgaaaaaaat tttagaacag 840
tccagcaaat tgctagtcag ggtgaattgt gaaattgggt gaagagctta sgatttctaat 900
ctcatgtttt ttcccttttca cttttttaa agaacaatga caaacaccca cttattttttc 960
aaggttttaa aacagtctac attgagcatt tgaaagggtg gctagaacaa ggtctcctga 1020
tccgtccgag gctgcttccc agaggagcag ctctccccag gcatttgcca agggaggcgg 1080
atttccctgg tagtgtagct gtgtggcttt ccttcctgaa gagtccgtgg ttgccctaga 1140
acctaacc ccctagcaaa actcacagag ctttcctgtt ttttctttcc tgtaaagaaa 1200
catttccttt gaacttgatt gcctatggat caaagaaatt cagaacagcc tgcctgtccc 1260
cccgcacttt ttacatatat ttgtttcatt tctgcagatg gaaagttgac atgggtgggg 1320
tgtccccatc cagcgagaga gtttcaaaag caaacatctt ctgcagtttt tcccaagtrc 1380
cctgagatac ttcccaaagc ccttatgttt aatcagcgat gtatataagc cagttcactt 1440
agacaacttt acccttcttg tccaatgtac aggaagtagt tctaaaaaaa atgcatatta 1500
atttcttccc ccaaagccgg attcttaatt ctctgcaaca ctttgaggac atttatgatt 1560
gtccctctgg gccaatgctt ataccagtg aggatgctgc agtgaggctg taaagtggcc 1620
ccctgcggcc ctagcctgac ccggaggaaa ggatggtaga ttctgttaac tcttgaagac 1680
tccagtatga aaatcagcat gccgcctag ttacctaccg gagagttatc ctgataaatt 1740
aacctctcac agttagtgat cctgtccttt taacaccttt tttgtgggtt tctctctgac 1800
ctttcatcgt aaagtgtggt ggaccttaag tgatttgctt gtaattttgg atgattaaaa 1860
aatgtgtata tatattagct aattagaaat attctacttc tctgttgcca aactgaaatt 1920
cagagcaagt tcctgagtg gtggatctgg gtcttagttc tggttgattc actcaagagt 1980
tcagtgtcga tacgtatctg ctcatattga caaagtgcct catgcaaccg ggccctctct 2040
ctgcggcaga gtcccttagtg gaggggttta cctggaacat tagtagttac cacagaatac 2100
ggaagagcag gtgactgtgc tgtgcagctc tctaaatggg aattctcagg taggaagcaa 2160
cagcttcaga aagagctcaa aataaattgg aaatgtgaat cgcagctgtg ggtttttacca 2220
ccgtctgtct cagagtccca ggaccttgag tgtcattagt tactttattg aaggtttttag 2280
acccatagca gctttgtctc tgtcacatca gcaatttcag aaccaaaagg gaggtctctc 2340
gtaggcacag agctgcacta tcacgagcct ttgtttttct ccacaaaagta tctaacaaaa 2400
ccaatgtgca gactgattgg cctggtcatt ggtctccgag agaggagggt tgccctgtgat 2460
ttcctaatta tcgctagggc caaggtggga tttgtaaagc tttacartaa tcattctgga 2520
tagagtcttg ggaggtcctt ggcagaactc agttaaatct ttgaagaata tttgtagtta 2580
tcttagaaga tagcatggga ggtgaggatt ccaaaaacat tttattttta aaatatcctg 2640
```

```

tgtaacactt ggctcttggt acctgtgggt tagcatcaag ttctccccag ggtagaattc 2700
aatcagagct ccagtttgca tttggatgtg taaattacag taatcccatt tcccaaacct 2760
aaaatctgtt tttctcatca gactctgagt aactgggtgc tgtgtcataa cttcatagat 2820
gcaggaggct caggtgatct gtttgaggag agcaccctag gcagcctgca ggggaataaca 2880
tactggccgt tctgacctgt tgccagcaga tacacaggac atggatgaaa ttcccgtttc 2940
ctctagtttc ttctgtagt actcctcttt tagatcctaa gtctcttaca aaagctttga 3000
atactgtgaa aatgtttttac attccatttc atttgtgttg tttttttaac tgcattttac 3060
cagatgtttt gatgtttatcg cttatgttaa tagtaattcc cgtacgtgtt cattttattt 3120
tcatgttttt tcagccatgt atcaatattc acttgactaa aatcactcaa ttaatcaawa 3180
aaaaaaaaaa aaaccncggg ggggggcccc gaacc 3215

```

<210> 52

<211> 626

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (571)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (572)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (573)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (618)

<223> n equals a,t,g, or c

<400> 52

```

cagtttgtgt attgcggcaa gaaggcccag ctcaacattg gcaatgtgct ccctgtgggc 60
accatgcctg aggttacaat cgtgtgctgc ctggaggaga agcctggaga ccgtggcaag 120
ctggcccggg catcaggga ctatgccacc gttatctccc acaaccctga gaccaagaag 180
acccgtgtga agctgccctc cggtccaag aaggttatct cctcagccaa cagagctgtg 240
gttggtgtgg tggttgagg tggccgaatt gacaaaccca tcttgaaggc tggccgggcg 300
taccacaaat ataaggcaaa gaggaactgc tggccacgag tacgggggtg ggccatgaat 360
cctgtggagc atccttttgg aggtggcaac caccagcaca tcggcaagcc ctccaccatc 420
cgcagagatg cccctgctgg ccgcaaagt ggtctcattg ctgcccgcgc gactggacgt 480
ctccggggaa ccaagactgt gcaggagaaa gagaactagt gctgagggcc tcaataaagt 540
ttgtgtttat gccaaaaaaa aaaaaaaaaa nnnngggggc cgctttarag rwtcctccaa 600
ggggccaact tacccttnca tgcaaa 626

```

<210> 53

<211> 920

<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (617)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (621)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (725)
<223> n equals a,t,g, or c

<400> 53
atgagggctc ggctacagca agaagtagag gagcagctca aaaagaaatg tttcactctg 60
ctctgctact atgatcccaa ttcagatgct gacagtgaaa ccgtgaaggc agcaaagggtg 120
tggaactcgc cagagtcctg gtgggtgagc agcagcagtg ccasgatgcc aagagccagc 180
agaaggagca gatgttgctg ctggagaaka agagtgtctg ttactcccag gtgcttctcc 240
gctgcctcac tttgctgcag aggcttcttc aagaacaccg gctgaagact caatccgagc 300
tagaccgcat caatgcccag tacctggaag tcaagtgcgg tgctatgac ctttaagctga 360
ggatggagga gctaaagatt ttgtccgaca cttacactgt tgagaaaagt gaagttcatc 420
gtctgattag ggaccgtttg gagggagcca ttcacctaca ggagcaggac atggagaact 480
caagacaggt cctgaactcc tatgaggtcc ttggggagga gtttgacagg ctggtgaaag 540
agtacaccgt actcaagcag gcaacagaga acaagcgggt ggccctccag gagttcagca 600
aggctctaccg ttgagcntcg ncagggccag gagacatggc ttctgcatag ctgctgcctc 660
ctaattcttc tgctagtggg accaccttca cctggggctg ccttcagtac aagggagtgt 720
ggaanatstt acgcttgaaa cactgcagtc atttaggcac tctcctggtt tctctttatt 780
ttttatgact gggcctcttc tggaaaatct agcaaggaga tttatataat ttttatgcat 840
agctgtgtgt cagtgtcagc cctgtattgt atttgattat ctcctgaata aagttatgat 900
attawaaaaa aaaaaaaaaa 920

<210> 54
<211> 1090
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (1024)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1034)
<223> n equals a,t,g, or c

<400> 54

```

gagtaaccca gaaatgatgt tgcatttttt gctttacctg ataattgaaa ctttcaacaa 60
tctctggagt gactttttct cctcgaattg aaacaagtct atggcaaaag aagctgcatt 120
tttttcacaa aaggggaagat ggtaacaatg gtcacttcaa acttttgggc taaattatat 180
gtacacagaa atgttcaaaa tcatagtttt aatgtgtttt gaaaaggcca cacaattata 240
ctttatcttt tcttaataat cctgcaaadc tctgccctgg aatccgaaat ctgaaaatgt 300
actggccttg acaaaatttg ttttgtgtgt tagagttata aatcattaat ctttatttcg 360
gggtggtttac gtttatgccg gttcctttat atttaaattt cttgttttat atattttgaa 420
tgtctttata gatttcttta aatttcctta tagaaccatt aatagaaaat cattacattt 480
aaaatatacc ttacagcaaa agcatccaaa taagtatagg gtttatgtcc ttatttttct 540
ttcagctgaa tacgaatgaa cacagtgggt gaatttctga agggaagtga tgaaattata 600
tttatttcag tgggcacttt tccattttac cactgtacca ttatttgggt cctggagtta 660
tactactaatt ttcagtatat tactgttaaa ttaccaaacac aaggcaattt atttgaaaga 720
ttccgtttat cctgccattg ctttgaaaag cagcaggaaa cgaaatcctt tgacttgtat 780
cagcttctgc agagcatctt tgttttcctt tgcctttgtt ttcctacctt ttgaatcaga 840
ttccgtttta gtcaggaaga cttcttggga ccattcttag taacctgaaa tttctttttt 900
aattgcatga agtggattga tcatgagcaa atgatgtgct tatttctccc tctactgtga 960
atatctttga acttgctgtt ttcaatatgg gcagcacaaa ggtgagagat acatattaat 1020
agtngtatgt attnctctta tacattagat acctatattt aaatgaaagg gccaatgtgt 1080
aaacatatat                                     1090

```

<210> 55

<211> 1464

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (766)

<223> n equals a,t,g, or c

<400> 55

```

ccgctccgga attcccgggt cgacccacgc gtccgccac gcgtcgcca cgcgtccggg 60
gacgtctca gctctcggcg cacggcccag cttccttcaa aatgtctact gttcacgaaa 120
tcctgtgcaa gctcagcttg gaggtgatc actctacacc cccaagtga tatgggtctg 180
tcaaagccta tactaacttt gatgctgagc gggatgcttt gaacattgaa acagccatca 240
agaccaaagg tgtggatgag gtcaccattg tcaacatttt gaccaaccgc agcaatgcac 300
agagacagga tattgccttc gcctaccaga gaaggaccaa aaaggaactt gcatcagcac 360
tgaagtcagc cttatctggc cacctggaga cgggtgatttt gggcctattg aagacacctg 420
ctcagtatga cgcttctgag ctaaaagctt ccatgaaggg gctgggaacc gacgaggact 480
ctctcattga gatcatctgc tccagaacca accaggagct gcaggaaatt aacagagtct 540
acaaggaaat gtacaagact gatctggaga aggacattat ttcggacaca tctggtgact 600
tccgcaagct gatggttgcc ctggcaaaag gtagaagagc agaggatggc tctgtcattg 660
attatgaact gattgaccaa gatgctcggg atctctatga cgctggagtg aagaggaaaag 720
gaactgatgt tcccaagtgg atcagcatca tgaccgagcg gagtgncccc acctccagaa 780
agtatttgat aggtacaaga gttacagccc ttatgacatg ttgaaaagca tcaggaaaaga 840
ggttaaagga gacctggaaa atgctttcct gaacctgggt cagtgcattc agaacaagcc 900
cctgtatttt gctgatcggc tgtatgactc catgaagggc aaggggacgc gagataaggt 960
cctgatcaga atcatggtct cccgcagtga agtggacatg ttgaaaatta ggtctgaatt 1020
caagagaaag tacggcaagt ccctgtacta ttatatccag caagacacta agggcgacta 1080
ccagaaagcg ctgctgtacc tgtgtggtgg agatgactga agccccacac ggcctgagcg 1140

```

```

tccagaaatg gtgctcacca tgcttccagc taacagggtct agaaaaccag cttgcgaata 1200
acagtccccg tggccatccc tgtgaggggtg acgttagcat taccaccaac ctcatttttag 1260
ttgcctaagc attgcctggc cttcctgtct agtctctcct gtaagccaaa gaaatgaaca 1320
ttccaaggag ttggaagtga agtctatgat gtgaaacact ttgcctcctg tgtactgtgt 1380
cataaacaga tgaataaaact gaatttgtac tttaraaaaa aaaaaaaaaa aactyrgggg 1440
ggggccccgka cccattggcc ttag                                     1464

```

```

<210> 56
<211> 985
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc feature
<222> (647)
<223> n equals a,t,g, or c

```

```

<220>
<221> misc feature
<222> (875)
<223> n equals a,t,g, or c

```

```

<220>
<221> misc feature
<222> (962)
<223> n equals a,t,g, or c

```

```

<220>
<221> misc feature
<222> (973)
<223> n equals a,t,g, or c

```

```

<400> 56
agaagttgct agtgttcaat gcagctgggg tgaaacccca ggggcaaggt ggctggcttt 60
gatctggacg ggacgctcat caccacacgc tctgggaagg tctttccac tggccccagt 120
gactggagga tcttgtaacc agagattccc cgtaagctcc gagagctgga agccgagggc 180
tacaagctgg tgatcttcac caaccagatg agcatcgggc gcgggaagct gccagccgag 240
gagttcaagg ccaaggtgga ggctgtggtg gagaagctgg ggggtcccctt ccaggtgctg 300
gtggccacgc acgcaggctt gtaccggaag ccggtgacgg gcatgtggga ccatctgcag 360
gagcaggcca acgacggcac gcccataatc atcggggaca gcatctttgt gggagacgca 420
gccggacgcc cggccaactg ggccccgggg cggaagaaga aagacttctc ctgcgccgat 480
cgctgtttg ccctcaacct tggcctgccc ttcgccacgc ctgaggagtt ctttctcaag 540
tggccagcag ccggttcga gctcccagcc tttgatccga ggactgtctc ccgctcaggg 600
cctctctgcc tccccgagtc cagggccctc ctgagcgcca cccggangtg gttgtcgag 660
tgggattccc tggggccggg aagtcacact ttctcaagaa gcacctcgtg tcggccggat 720
atgtccacgt gaacagggac acgctaggct cctggcagcg ctgtgtgacc acgtgtgara 780
cagccctgaa gcaagggaaa cgggtcgcca tcgacaacac aaaccagac gccgcgagcc 840
gcgcagagta cgtccartgt gcccgagccg cggngtacc cctgcccgtg cttcctcttc 900
accgccactc tggagcaggc gcgccacaac aaccgggtga gcccgcttca gcccgggaca 960
cnccccgggg atngcacccc ctgga                                     985

```

<210> 57
<211> 1246
<212> DNA
<213> Homo sapiens

<400> 57
ctcagagtcg cgaggccgga cgcagcgcgc gccgccccac tcgccccagc cgccgccatg 60
aaggccgtgg tgcagcgcgt caccgcgggc agcgtcacag ttggaggaga gcagattagt 120
gccattggaa ggggcatatg tgtgttgctg ggtatttccc tggaggatac gcagaaggaa 180
ctggaacaca tgggtccgaaa gattctaaac ctgcgtgtat ttgaggatga gagtgggaag 240
cactggctga agagtgtgat ggacaaacag tacgagattc tgtgtgtcag ccagtttacc 300
ctccagtgtg tcctgaaggg aaacaagcct gatttccacc tagcaatgcc cacggagcag 360
gcagagggct tctacaacag cttcctggag cagctgcgta aaacatacag gccggagctt 420
atcaaagatg gcaagtttgg ggcctacatg caggtgcaca ttcagaatga tgggcctgtg 480
accatagagc tggaatcgcc agctcccggc actgctacct ctgacccaaa gcagctgtca 540
aagctcgaaa aacagcagca gaggaaagaa aagaccagag ctaagggacc ttctgaattc 600
aagcaaggaa agaaacactc cccgaaaaga agaccgcagt gccagcagcg gggctgaggg 660
cgacgtgtcc tctgaacggg agccgtagct caggaggcag aattcagtgt gttatcattg 720
ggcagaactg gatcctgaaa aattcaagat gctaagcacc tacactactt taagaatttg 780
gaactgaaac atgaagagga agacagaaat aagaatttgg gaacctgaat agctctgcaa 840
aaaacaccaa aggaccgttt tatcgttttc tgttgttgct gtggtggagt gatgcagtgg 900
gcactkccsg tgggccaggg ggcgggtgcg catgtggtag aagggtgtgcg ctctgtgcctc 960
ccccacagaa aggctttgtt ggtttctacc acatcttggc ttgcttttgg aacaggctgg 1020
ccccagcatc atttgtcatc aagtccactg tgggtgtattc tgcgtgtcca tggcgggggt 1080
tctccaayac actcacactg tccatgttct ttttattgcc agggcccgtg ttgaagtgtc 1140
aagagagcaa tcatcaatga taatgtattg tgtgagacct ttgcatcttg taaattttct 1200
cttttttcta aaaataaata ataataaaat cctaaatctc aacaaa 1246

<210> 58
<211> 1966
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (1926)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1942)
<223> n equals a,t,g, or c

<400> 58
gggagaaaga tccttcactc acagaaccag ttattagggg gttaatgaaa ttttggccta 60
aaacatgtag tcaaaaagag gtcatgttcc ttggggactg gaagaaatat tggatgtgat 120
tgaaccttca caatttgta aaatccaaga acctttgttt aaacaaatcg ccaagtgtgt 180
atctagcccc cattttcagg tggcagaaag agcactctat tattggaata atgaatacat 240
catgagtttg atagargaaa actctaactg catccttccc atcatgtttt ccagccttta 300
taggatttca aaagaacatt ggaatccggc tattgtggcg ttggtgtaca atgtgttgaa 360
ggcatttatg gaaatgaaca gcaccatgtt tgacgagctg acagccacat acaagtcaga 420

```

tcgtcagcgt gagaaaaaga aagaaaagga gcgtgaagaa ttgtggaaaa aattggagga 480
tctggagtta aagagaggtc ttagacgtga tggataaatt ccaacttaac aaaaacaatg 540
acaacaacat tactaacctg tggagtcaca cgtttatgta gtagaagatg gagcaacagt 600
tttctgtatt gtgcaacttt acagtagatt tcacctttgt ttcattatta cagcagcact 660
gtatatacct gtctcctaagt aaaggaaaaa acaaaataag gacttcaatc caaagtttgg 720
acagtagatg gacttctcag aactttgcaa acataatcat tgttctcacc ctcttttaaa 780
aaaaaaaaatc ggtcttcaaa gatctgttga tgaaattgct atgttaaaat tccattatcg 840
ggagttcctt atttatcact agcagagagt atgatacaat tttcaaatgt gaacaatcct 900
aaatttagct tgtctttctg ctaagctggt aaatgtatgt atagtaaagg aagaaaaaaa 960
gactgtcatt tccttataag tttgtgtaac atcctcctct ggataacttg actgtaattt 1020
racatctttt tcttttgcac atcttcctga gttgaatgtc cacgtggaat ggggtcatga 1080
attataaaag tccctgataa aagttttgtt tactggggtg aacatctttc cagtaaccag 1140
gtagtcctgg tactccttta gttttaaaat taggagttaa gagagaagag gtgataaaca 1200
tagtagggaa gggaatatcg gattcatgca tcagtttatg gtgaatccaa atcaatgtct 1260
tgaatccttt gaaaacaggc actgggacat cacaggcttc agtacctgac cagtattagt 1320
tgcatataatc attgaacaca cataccagag atgtttttaga aatgtgagaa aaacatcctt 1380
ttggaccatt tgaaataaga aagacaaaca ctaaacaata caaccatgaa attgatcacc 1440
gggattgcaa atctaattgg gaaaagaggt gagcaaacag cttggactgt ttggagttgt 1500
tgccttactt tttaatatgt atttataaag tattccagca aaagaggatg tagcctctgg 1560
gaaaaaaciaa acatgttaca gtgttttttg tagattctcg ttctatatct catcacagcg 1620
ccagccctgt ttttagccgg aaaggattca ggataaacat tattatgcat tctgaattgg 1680
atgcatattc ctaactactg tatgtgttac caaagtggt tctacaaatg ctactgaaaa 1740
aaatctggaa attcctaattg tcctgagtat taataataaa gtttaaaaaat gcttttatat 1800
caaaggtgca tcgtgaccaa attgttttaa aaaaaaaaac aaaaaaaaca aaatctaggg 1860
ctgtatttta tatatatata tatatatata tatatatata tatatatata tatatatgtc 1920
cttatnggac tctctgcttt gntattttaa taaaaaatct tacatc 1966

```

<210> 59

<211> 1611

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (7)

<223> n equals a,t,g, or c

<400> 59

```

cgcgtcngtg cgaattcggc acgaggggac ttcccagagc tcacaatgga ggttgatggt 60
aaggtagagt caattatgaa gaggacagct ttggtagcca atacctcaa tatgcctgtt 120
gctgctagag aagccyctat ttatactgga atcacactgt cagagtactt ccgtgacatg 180
ggctatcatg tcagtatgat ggctgactct acctctagat gggctgaggc cttagagaaa 240
tctctggctg tttagctgaa atgcctgcag atagtggata tccagcctat cttggtgccc 300
gtctggcctc gttttatgaa cgagcaggca gggtgaaatg tcttgaaaat cctgaaagag 360
aagggagtgt cagcattgta ggagcagttt ctccacctgg tggtgatttt tctgatccag 420
ttacatctgc cactcttggt atcggttcagg tgttctgggg cttagataag aaactagctc 480
aacgtaagca tttccctct gtcaattggc tcacagctc cagcaagtat atgcgtgcct 540
tgatgaata ctatgacaaa cacttcacag agttcggtcc tctgaggacg aaagctaagg 600
aaattctgca ggaagaagaa gacctggcag aaattgtaca gcttgaggga aaggcttctt 660
tggcagaaac agataaaaac actctggagg tagcaaaact tatcaaagat gatttcctac 720
aacaaaatgg atatactcct tatgacaggt tctgcccatt ctacaagaca gtagggatgc 780

```

```
tgtccaacat gattgcattt tatgatatgg ctcgtagagt gtttgaaacc actgcccaga 840
gtgacaataa aatcacatgg tccattattc gtgagcacat gggagacatc ctctataaac 900
tttcctccat gaaattcaag gatccactga aagatggtga ggcaaagatc aaaagcgact 960
atgcacaact tcttgaagac atgcagaatg cattccgtag ccttgaagat tagaagcctt 1020
gaagattaca actgtgattt ccttttcctc agcaagctcc tatgtgtata ttttcctgaa 1080
tttctcatct caaacccctt gcttctttat tgtgcagctt tgagactagt gcctatgtgt 1140
gttatttgtt tccctgtttt tttggtaggt cttatataaa acaaacattc ctttgttcta 1200
gtgttgtgaa gggcctcccct cttcctttat ctgaagtggg gaatatagta aatatacatt 1260
ctggttacac tactgtaaac ttgtatgtag ggtgatgacc ctctttgtcc taggtgtacc 1320
ctttcctcat ctctattaaa ttgtaaacag gactactgca tgtactctct ttgcagttaa 1380
tttggaatgg aaggccaggt ttctataact tttgaacagg tactttgtga aatgactcaa 1440
tttctattgt ggtaagctca ttggcagctt agcattttgc aaaggaattg ctttgcagga 1500
aatatttaat tttcaaaaac ataataatta atgttccaat tatgcatcac ttccccagk 1560
ataaaycagg aatgkttgtg agaaaccatt gggaactata ctctttttta a 1611
```

<210> 60

<211> 1849

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (100)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (977)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1846)

<223> n equals a,t,g, or c

<400> 60

```
gattccccggg tgcacccacg cgtccgcgcg gaatctcagt tagcgggtgga gaggcagtat 60
gtccggttca atggcgactg cggaagctag cggcagcgan tgggaaaggg caggaaagtcg 120
agacctcagt cacctattac cggttggagg aggtggcaaa gcgcaactcc ttgaaggaaac 180
tgtggcttgt gatccatggg cgagtctacg atgtcacccg cttcctcaac gagcaccctg 240
gaggagaaga ggttctgctg gaacaagctg gtgtagatgc aagtgaaagc tttgaagatg 300
taggacactc ttctgatgcc agagaaatgc taaagcagta ctacattggt gatatccatc 360
cgagtgcact taaacctgaa agtggttagca aggacccttc aaaaaatgat acatgcaaaa 420
gttgctgggc atattggatt ttacccatca taggcgctgt tctcttaggt ttcctgtacc 480
gctactacac atcggaagc aaatcctcct gaggaggcct tgctgaagtt agaaagtgc 540
tccacttttg ggcgaaaact agagacttgc ttgggggctg cagaagtgcc ctctcctcga 600
atcctgccag ttgcattctt cccctttgga gccaaagcga ttggccagac atcacctcag 660
atctgagacc agcgtcttcc atctctcaga gccttactcc caaagtacct gctcactgtt 720
ccgtgttgaa caattgccgg tgtttcctct cttcactggg ttccatgagt acccttatat 780
ttcacaactt tctgttcata agttatagt acattgctct ttggtaaaaa tgcctgcttt 840
ccaatacttt gattgcatat tagacattct taacagggcg gcagtctagt gttgaaagtt 900
```



```

ttatttttcc atttttcttt taagttaaatt ttttttataaa aattctgatt tagggctagg 960
tgtggtggct caggccngta atcckggcac ttkgggrggc caaggtggga agatcgsttg 1020
aggccaagag ttcaagacca gcctgggcaa catagcgaga cccctatctg tattaaaaaa 1080
aaatctgatt taattctttt atttatcata aggggtttta ttcttgaagt aaagggttgc 1140
acctattaaa cttaaaactg ccaaatgatt tttgttcttt tatgtgcgtg ataaaaatac 1200
aaagaatggt gtggccacct cctccctttc aagctagggc agcaggtagc tcttcccagc 1260
ccctgagccc agccccttcc caagtgggtgc cggacaaaaa actacatggc cctttcgtgt 1320
cttgggggtg gaaagggagg gatgaattgg ggtgatagaa ccctggtgaa ttcagagtaa 1380
tctttcttta gaaaactggt gttttctaaa gaaacaggat aggagtttag agaaggcacc 1440
aaagctttca ctttggtttg gcaccagttt ctaacatctt gttttttcta ccctagctat 1500
cttttattgg taaaatataa atgtataatt atgtttgtag agctttacca aggagtttcc 1560
ctcctttttt gtttggtgat tagcaaattt ttgattctcc attttccaaa agtaagagac 1620
tccagcatgg ccttctgttt gccccgcagt aaagtaactt ccatataaaa tggatattga 1680
aagtgagagt tcatgacaac agaccgtttt ccatttcatc tgtattttat ctccgtgact 1740
ccaacttggt ggtttgttct gtttttccat gagaataaaa tactggcggg ttttttcaaa 1800
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaggngnga 1849

```

<210> 61

<211> 233

<212> DNA

<213> Homo sapiens

<400> 61

```

aagggtcggc ctctcaaagt gctgggatta caggcattag ccactgtgcc tggccaagaa 60
taaaaatttt ttaatcttga gaaraaacat acagktcata catataaaaa gccttgaaaa 120
tattattccc ttgactcac taattacact gctggaatat aaagaaatga tcctaaatat 180
atatgtagtt ttatggctct aaatatgtat aaagctttat gatcactcgt gcc 233

```

<210> 62

<211> 2333

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (3)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (6)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (7)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (14)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2327)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2331)

<223> n equals a,t,g, or c

<400> 62

```
cgncggnccg cganccacg cgtccggtg aagatatgtg gacttagtcc cactacaacc 60
ttagccatat attttgaggt tgtcaatcag cataatgctc caattcytca aggagggcgt 120
gggtgcaatcc agtttgtgac tcagtatcag cattcaagtg ggcagagacg catccgagtg 180
accaccattg ctaggaaactg ggcagatgct caaactcaaa tccaaaacat tgctgcatct 240
tttgaccagg aggcagctgc cattcttatg gcccggttag caatatatag agcagaaaca 300
gaagaaggtc cagatgtgct taggtggctg gacagacagc tcattcgact gtgtcagaaa 360
tttgagagaat atcataaaga tgaccaagt tccttcagat tttcagaaac tttctccctt 420
tatccacagt ttatgtttca tttaagaaga tcttctttcc tgcaagtttt taacaatagt 480
cctgatgaga gttcatatta tcgtcaccat tttatgcgtc aagatctgac ccagtctcta 540
attatgattc agcctatcct gtatgcgtat tcttttagtg gaccaccaga gccggttctt 600
cttgatagca gtagcattct tgcagatcgt attcttctca tggacacatt cttccagatt 660
ttgatttatc atggtgagac catagcacag tggcggaagt caggatacca ggatatgcct 720
gagtatgaaa atttccgccca cttctgcaa gcccagtggt atgatgcaca ggaaattctt 780
cactccagat ttccaatgcc aagatacatt gacactgaac atggaggcag ccaggcccgt 840
ttcctccttt caaaagtcaa cccttcacag actcataata atatgtatgc ctgggggcag 900
gagtctggag cacctattct tacagatgat gttagtttac aagtgtttat ggatcacttg 960
aagaaacttg ctgtgtccag tgctgcttga agtgctaata atgttaaaga cacttaagaa 1020
gatgaaataa tattcaaatt tcattttttc ctttttccat ttatctgttg aaaccaacag 1080
atattgctct atattttttg tattagtatg gtttgagaca acatatggaa aatgttcaca 1140
tttgtagatt aagctggaat tataatgaga gcaataagaa caaatttatt ttgcttacca 1200
cagtgttata gctggttcta gaaatttgaa gtctttataa ctttaattatg ttttaataaaa 1260
aatagagtct gcctcgtact acagatgtaa ctcatgttga tattgcagac agacccaaag 1320
tggcactgaa ttttcttgct caccttttaa aaacttgttc ctttaatttta gccagaaagc 1380
aaaaaaacaa tagtaatgat aaatgtgaac atttttgctt attcattgaa tatttttctg 1440
taattttcag cacttatgta tacacttttt ctgtacttac taggttaagg cagatttatt 1500
tttatgattt gtttaggaat tatttgattt tataatggta attttcatga tgataatgtt 1560
tttggttatt tggaagata gtttagagat gaaagggttt tttgggtaac aatcccgcag 1620
ctgacaaaaa atgtgaaatt tccacaaaat atccaactta tgtgactaaa cgcagtagtt 1680
tttttaaaag gggagataga aaataaatgg ttttggttga gtgcatttta gtaagccttt 1740
gcagtaaaat gacggttgta actactaaac caaatttagt tttcacagca tgggttttgtt 1800
gttttccctt tgtttttcag aggtaaaatt tgcatatat ccttcagtat tttaacacta 1860
ttttggcagt ttacacatta ctttttgttt ttccctcctt tttgtgaaat gtattaagtt 1920
gtggttctta ttgaaacagt attatataat gtttgcttaa ttatatcatg tgatgctcag 1980
ttctatttg atttattcat tagtattcac ttttacctt aaagtttact tgtagcaaat 2040
atgtttacat tgataaagcc agatatggtt tgacaatgaa atttacctat caagtactgc 2100
aaataaaaag tgggtcattg atatatgctt aggaggacag ttttaatgat tgtacttgca 2160
tgaacacaat catatgatgg taaagcagaa acttaagaaa aaattgttta tgtgttatat 2220
tcaattagct taaataagtt gctttgttat attttatttg aattgaacta cgctaggcct 2280
```

aaatgccaat aaaatataact tttcactggt aaaaaaaaaa aataaanacc nta 2333

<210> 63

<211> 1470

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1410)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1414)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1419)

<223> n equals a,t,g, or c

<400> 63

```

gcttcctgct gccacacctg tggttctgca gcccagtgcc caagtacttc ttcaagatgg 60
ccttctacaa tggctggatc ctcttcctgg ctgtgctcgc catccctgtg tgtgccgtgc 120
gaggacgcaa cgtcgagaac atgamgatct tgcgtctaata gctgctccac atcaaatacc 180
tgtacgggat ccgagtggag gtgcgagggg ctcaccactt cctccctcg cagccctatg 240
ttgttgtctc caaccaccag agctctctcg atctgcttgg gatgatggag gtactgccag 300
gccgctgtgt gccattgcc aagcgcgagc tactgtgggc tggctctgcc gggctggcct 360
gctggctggc aggagtcac ttcacgcacc ggaagcgcac gggggatgcc atcagtgtca 420
tgtctgaggt cgcacagacc ctgctcacc aggacgtgag ggtctgggtg tttcctgagg 480
gaacgagaaa ccacaatggc tccatgctgc cttcaaacg tggcgccttc catcttgagc 540
tgcaggccca gggtcccat gtcccatag tcatgtcctc ctaccaagac ttctactgca 600
agaaggagcg tcgttcacc tcgggacaat gtcagggtgc ggtgctgcc ccagtgccca 660
cggaagggtc gacaccagat gacgtccag ctctggctga cagagtccg cactccatgc 720
tcaactgttt ccgggaaatc tccactgatg gccgggtgg tggtgactat ctgaagaagc 780
ctgggggctg tgggtgaacc ctggctctga gctctcctcc catctgtccc catcttctc 840
cccacacctc cccaccagt gggccctgaa gcagggcmaa accctcttcc ttgtctcccc 900
tctccccact tattctctc tttggaatct tcaacttctg aagtgaatgt ggatacagcg 960
ccactcctgc cccctcttgg ccccatccat ggactcttgc ctcggtgcag tctccactct 1020
tgacccccac ctctactgt cttgtctgtg ggacagttgc ctccccctca tctccagtga 1080
ctcagcctac acaaggagg ggaacattcc atccccagt gagtctcttc ctatgtggtc 1140
ttctctaccc ctctacccca cattggccag tggactcatc cattctttgg aacaaatccc 1200
ccccactcca aagtccatgg attcaatgga ctcatccatt tgtgaggagg acttctcgcc 1260
ctctggctgg aagctgatac ctgaagcaat cccaggtcca tcmtgggagc tttcctcagc 1320
accttcacct tccctccag tgtagcctcc tgtcagtggt ggctggaccc ttctaattca 1380
gagggtctcat gcctgccctt gccagatgn ccanggtng tgcamtytyt ggggatacca 1440
gttcagctctc camatttytg ggttytggt 1470

```

<210> 64

<211> 939

<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (3)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (4)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (11)
<223> n equals a,t,g, or c

<400> 64
agnntaccgg ntccggaatt cccgggtcgg acccacgcgt ccggtctcct cagaagtcgc 60
ttagctcttc ggtggttgac acacgtccgg aggcctagcc gtcgcgtacc taggatgccg 120
cgtggaagcc gaagccgcac ctcccgcatg gccctccgg ccagccgggc cctcagatg 180
agagctgcac ccagccagc accagtcgct cagccaccag cagcggcacc cccatctgca 240
gttggtctct ctgctgctgc gcccggcag ccaggtctga tggcccagat ggcaaccact 300
gcagctggcg tggtgtggg ctctgctgtg gggcacacat tgggtcacgc cttactggg 360
ggcttcagtg gaggaagtaa tgctgagcct gcgaggcctg acatcactta ccaggagcct 420
cagggaaccc agccagcaca gcagcagcag ccttgccctc atgagatcaa acagtttctg 480
gagtgtgccc agaaccaggg tgacatcaag ctctgtgagg gtttcaatga ggtgctgaaa 540
cagtgccgac ttgcaaacgg attggcctaa tgaagaagtt caacctggag agatggaaaa 600
tcagctctca taactaagtt aatttagtat aaaaatagaa ttgatatgta gggataaaag 660
tgtaaccatc agttaaacct ctctgtcat tcctagcttc cttgcttcag aattgaaatg 720
gaagtggggg tgtccctact ctgtagaatc tgggactggg caaatgtttg tgtggcctcc 780
ttaaactagc tggtatgta tgattttatt ctttgtgagt taattagaat aaagtcattt 840
tcttccaagg tatggttcat ttagtctata gtctctggtt atgaaattag catcctccca 900
gatctgacag ctccctgagg ggttatataa ggagtagct 939

<210> 65
<211> 2068
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (308)
<223> n equals a,t,g, or c

<400> 65
gtaggaagtg tctgtagccg cagctgcgsg tccgggattc ccagccatgg cagattcctc 60
cgggcagcag gctcctgact acaggtccat tctgagcatt agtgacgarg cagccagggc 120
acaagccctg aacgagcacc tcagcacgcy tagtatgtcc aggggtactc actgtcccag 180
gcagacgtgg acgcgttcag gcagctctcg gccccgcccg ctgaccccca gctcttcac 240

```
gtggctcggg ggttcaggca catagaagcg ctccctgggta rcccctgtgg caaaggccag 300
ccctgcangc tyccaagcar gcaaaggccg gcgtgtgcag cccagtggt cccctcctgc 360
tgggacccas catgcagact ccacctttac aacagcctca ccaggaacaa ggaagtgttc 420
atacctcaag atgggaaaaa ggtgacgtgg tattgtgtg ggccaaccgt ctatgacgca 480
tctcacatgg ggcacgccag gtcctacatc tcttttgata tcttgagaag agtggtgaag 540
gattacttca aatttgatgt cttttattgc atgaacatta cggatattga tgacaagatc 600
atcaagaggg cccggcagaa ccacctgttc gagcagatc gggagaagag gcctgaagcg 660
gcacagctct tggaggatgt tcaggccgcc ctgaagccat ttccagtaaa attaaatgag 720
accacggatc ccgataaaaa gcagatgttc gaacggattc agcacgcagt gcagcttgcc 780
acagagccac ttgagaaagc tgtgcagtc agactcacgg gagaggaagt caacagctgt 840
gtggaggtgt tgctggaaga agccaaggat ttgctctctg actggctgga ttctacactt 900
ggctgtgatg tcactgacaa ttccatcttc tccaagctgc ccaagtctg ggagggggac 960
ttccacagag acatggaagc tctgaatgtt ctccctccag atgtcttaac ccgggttagt 1020
gagtatgtgc cagaaattgt gaactttgtc cagaagattg tggacaacgg ttacggctat 1080
gtctccaatg ggtctgtcta ctttgatata gcgaagttg cttctagcga gaagcactcc 1140
tatgggaagc tgggtgcctga ggccgttggg gatcagaaag cccttcaaga aggggaaggt 1200
gacctgagca tctctgcaga ccgctgagt gagaagcgct ctccaacga ctttgccctta 1260
tggaaggcct ctaagcccgg agaaccgtcc tggccgtgcc cttggggaaa gggctcgtccg 1320
ggctggcata tcgagtgtc ggccatggca ggcaccctcc taggggcttc gatggacatt 1380
cacggaggtg ggttcgacct ccggttcccc caccatgaca atgagctggc acaktcggag 1440
gcctactttg aaaacgactg ctgggtcagg tacttcctgc acacaggcca cctgaccatt 1500
gcaggctgca aaatgtcaaa gtcactaaaa aacttcatca ccattaaaga tgccttgaaa 1560
aagcactcag cacggcagtt gcggctggcc ttcctcatgc actcgtggaa ggacaccctg 1620
gactactcca gcaacacccat ggagtcagcg cttcaatatg agaagttctt gaatgagttt 1680
ttcttaaatg tgaaagatat ctttcgcgct cctgttgaca tcactgggtc gtttgagaag 1740
tggggagaag aagaagcaga actgaataag aacttttatg acaagaagac agcaattcac 1800
aaagccctct gtgacaatgt tgacacccgc accgtcatgg aagagatgcg ggccttggtc 1860
agtcagtgca acctctatat ggcagcccgg aaagccgtga ggaagaggcc caaccaggct 1920
ctgctggaga acatcgccct gtacctcacc catatgctga agatctttgg ggccgtagaa 1980
gaggacagct ccctgggatt cccggtcgga gggcctggaa ccagcctcag tctcgaggcc 2040
acagtcatgc cctaccttca ggtgttat 2068
```

<210> 66

<211> 1391

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (16)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (20)

<223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (25)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (27)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (1343)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (1358)
 <223> n equals a,t,g, or c

<400> 66
 nccacgcgtc cgcggnacgn tggngnttt taaaatgggt tttttgttg ttgttgatgg 60
 ggggggagag ggtccagcat tttttaaatg ttttcacatc gtgtgttcca aaaataactg 120
 gttagcctaa gtcacttcca ccctccaatg ttgtgaatgc agtctctagc attcgctatt 180
 taatgtcttc ttcctgcact atttgagaaa tcgcgagggt gacttaatac cgcagtcgcc 240
 acttcgcgga ccggaggcgg agtctgctta gttctgagga ctgcgtgggt ccgcgcagag 300
 agctcctgct aggcctgcgc gtcccggttct aaattcttac cctttagtyc ttgtcaccac 360
 ccccgccgtg ggaacggcct gacagtcact cgtcaaagga agtggctgcc ggcagctctt 420
 gaccgggaat cggatcctag tcccaccccc tccgctccag gcttccttct gcaacaggcg 480
 tgggtcacgc tctcgtctgg tctttctgcc gccatcttgg ttccgcgttc cctgcacaaa 540
 atgcccggcg aagcacagaa accgtccctg ctacagagca ggagttgccg cagccccagg 600
 ctgagacagg gtctggaaca gaatctgaca gtgatgaatc agtaccagag cttgaagaac 660
 aggattccac ccaggcaacc acacaacaag ccagctggc ggagcagct gaaatcgatg 720
 aagaaccagt cagtaaagca aaacagagtc ggagtgaata gaaggcacgg aaggctatgt 780
 ccaaaactggg tcttcggcag gttacaggag ttactagagt cactatccgg aaatctaaga 840
 atatcctctt tgatcatcaca aaaccagatg tctacaagag ccctgcttca gatacttaca 900
 tagtttttgg ggaagccaag atcgaagatt tatcccagca agcacaacta gcagctgctg 960
 agaaattcaa agttcaaggt gaagctgtct caaacattca agaaaacaca cagactccaa 1020
 ctgtacaaga ggagagtga gaggaagagg tcgatgaaac aggtgtagaa gttaaggaca 1080
 tagaattggg catgtcacia gcaaattgtg cgagagcaaa ggcagtccga gccctgaaga 1140
 acaacagtaa tgatattgta aatgcgatta tggaattaac aatgtaacca tatggaagca 1200
 actttttttg gtgtctcaaa ggagtaactg cagcttggtt tgaaatttgt actgtttcta 1260
 tcataaataa agttatggct tcttggttga tgaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1320
 aaaaaaaaaa aaaaaaaaaa cgnggccgca ggcttttnc ctttggtggg gggtattttt 1380
 ggcttgcccc t 1391

<210> 67
 <211> 659
 <212> DNA
 <213> Homo sapiens

<220>
<221> misc feature
<222> (139)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (475)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (585)
<223> n equals a,t,g, or c

<400> 67
gcaaggctgc tgctatgggg ccgggcgggc tgtggcgcgg ctgctcgccc cactaatgtg 60
gcgcagggcg gtttcctcgg tggcggggtc cgcggttggg gccgagcccg ggcttcgggt 120
gctggccgtg cagcgyttnc ccgtagagca gcgttctgcc gggcttgcca gaccccaaac 180
tttgtccgcg gcctgcacag cgaagcctgg gctggaggag cgggcggagg ggacgggtcaa 240
cgagggacgc ccagaatcgg acgcggcaga tcatactggt cccaagtgtg acatcgatat 300
gatggtttca cttctgaggc aagaaaatgc aagagacatt tgtgtgatcc argttcctcc 360
agaaatgaga tatacagatt actttgtgat tgtagtgga acttctaccc gacacttaca 420
tgccatggcy ttctacgttg tgaaaatgta caaacacctg aaatgtaaac gtganccctc 480
atgttaagat agaaggggaag gacactgatg actggctgtg cgtggatttt ggcagcatgg 540
tggattcatt tgaatgcttc cagaaaacca gagaaatcta tgganttaga gaaattatgg 600
accctacgtt cttatgaatg accagttagc tcagatagca cctgaggaca gtacctgta 659

<210> 68
<211> 2981
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (2858)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (2948)
<223> n equals a,t,g, or c

<400> 68
ggcagagggt ttccggcctg agaaaccgtc atgtttctgg ggagtcacct cagctggcag 60
ttaccaccgt gttagaaagc agcctcagga ccggccacct ccactactgg cgtcaccatg 120
ggggctgtgc tgggtgtctt ctccctcgcc agctgggttc catgcctctg cagcgggtgcc 180
tcattgtttg tgtgtagtgt ctgtcctaac agtaagaatt ccacggtgac tcgcctcatt 240
tatgctttca ttctcctcct gagcactgtc gtatcctata tcatgcagag aaaagagatg 300
gaaacttact tgaagaagat tcctggattt tgtgaagggg gattttaaact ccatgaggct 360

```

gatataaatg cagataaaga ttgtgatgtg ctggttggtt ataaagctgt gtatcggatc 420
agctttgcca tggccatctt tttctttgtc ttttctctgc tcatgttcaa agtaaaaaaca 480
agtaaagatc tccgagcggc agtacacaat gggttttggt tcttcaaaat tgctgccctt 540
attggaatca tggttggctc tttctacatc cctgggggct atttcagctc agtctggttt 600
gttgttgga tgataggggc cgccctcttc atcctcattc agctggtgct gctggtagat 660
tttgctcatt cttggaatga atcatgggta aatcgaatgg aagaaggaaa cccaagggtt 720
tggtatgctg ctttactgtc tttcacaagc gccttttata tcctgtcaat catctgtgtc 780
gggctgctct atacatatta caccaaacca gatggctgca cagaaaacaa gttcttctc 840
agtattaacc tgatcctttg cgttgtggct tctattatat cgatccaccc aaaaattcag 900
gaacaccagc ctcgctccgg cctcttgagc tcctccctca tcaccctcta cactatgtac 960
ctcacctggt cagccatgtc caatgaacct gatcgctcct gcaatcccaa cctgatgagc 1020
tttattacac gcataactgc accaaccctg gtcctggaa attcaactgc tgggtccct 1080
accctactc caccatcaaa gagtgggtct ttactggatt cagataattt tattggactg 1140
tttgtctttg tttctgtcct cttgtattct agcatccgca cttccactaa tagccaagta 1200
gacaagctga ccctgtcagg gagtgacagc gtcaccttg gtgatacaac taccagtgg 1260
gccagtgat aagaagatgg acagcctcgg cgggctgtgg acaacgagaa agagggagtg 1320
cagtatagct actccttatt ccacctcatg ctctgcttgg cttccttgta catcatgatg 1380
accctgacca gctggtacag ccctgatgca aagtttcaga gcatgaccag caagtggcca 1440
gctgtgtggg tcaagatcag ctccagctgg gtctgcctcc tgctttacgt ctggaccctt 1500
gtggctccac ttgtcctcac cagtcgggac ttcagctgaa cctctgagtg ccaaggacac 1560
cactggaact cacaaagggt tccttcaccg aaaaccata taccttttaa gttgtttca 1620
actaaaatat taagtgaatg ctttgcaagt ttgactgtat gcaggtttat atcagaaggt 1680
gagattgaat aatgcttgat gcagaatcga aacttctcat ttatctgtat attatgttta 1740
cttctaagga tatagcacia agggaacatt tttgttttaa agtgaactac agctgtgctg 1800
tgaagagagt tctttataaa gcctgtaggt tcttttaact ttggtttaaa atgtaagata 1860
ggaaaaatgt ggatatattg ggccatgctt aatatattta tattgcagta tcctttaaaa 1920
gcaaaaaaaa aaaaatgcat ttatattaca gttttcctct atgaaagtcc ttacttata 1980
gatacaagca ctgtgttttg tgcttaaaact cttcagcggg gtagcatcaa agttcttggg 2040
gaaggatcgt atatgtgggt cccttcctta gaagaatggg tgctgatatg gctactgctt 2100
ctacatcttg agttttttta tttacttttt ttacactgta gcattgagac tgcttgattc 2160
aagtctggtg ctttgccaga tgtattaatt tccataaatg ctttgtgagt ttggttaaaa 2220
tgaagattca cttgggaaaa cactgcagct ttagtctgtg ttactatctt gttatgagta 2280
tgtaaaagta aaatgcatgt gaatttatca tatttgcact atgaaggat ttggttaaaa 2340
tacaaagact tttaagattt taaggccctt tcttccaaca gcttttatag ttagcagcca 2400
ttctttatct tctggatagc caggttttat cacgcttcta gtcaggatgc tcctattcct 2460
tctaaaaatt acggtctgac tagtgagcaa agtcttgaat ttattcaaaa gtcctaaata 2520
ccttctctag gtaagacact tggtagatga gagacggaag gcattgtcaa gaaccatttt 2580
catgagaggt ggtgtgcaaa aaggtagaat aaaagagttc tttcaamaaa gatttactgt 2640
ctawtctgta ctagaccctg taggttttgg ggtacagtgt taaacatgat agaggctctg 2700
ccgtcttgga ctttaatagc ttagagaaga gagcaaatga gctgacaggt gggtataatg 2760
tgaattagtg ctgtggttta ggaattggag agaactcaaa ggagaggtat ttggtgtaat 2820
ggtaggcttt ctggagaaaa tgatatttaa gccaaagant cttagaagtt agctaagaga 2880
gagatgggaa aatgagacga cattgctgga gtagataaaa ctgcatgtta aaggcaggaa 2940
gatggggnaa aaaattccat aaaactggaa tggggaaatg t 2981

```

<210> 69

<211> 603

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature
<222> (584)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (590)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (595)
<223> n equals a,t,g, or c

<400> 69
tcgacccacg cgtccggcac cgggggaaca aggtcgtgaa aaaaaaggtc ttggtgaggt 60
gccgccattt catctgtcct cattctctgc gcctttcgca gagcttccag cagcgggatg 120
ttggggccaga gcatccggag ttcacaacct ctgtgggtccg tagagccact atgaggaggg 180
ccctgggaag aatttgccat tttcagtgkg taaggggcac ggcttcggtg ggggaggggg 240
cgcttggctg tgactcgcgc acctgcaagg ccgcctccgg gctgtggcgt gggagatgat 300
agccagaaac caggctgaga cgcagactag cattccactt agcccaagga ccagtgagga 360
agctgggcat cctagcgcgt accgctaaag gaatgggcag gtagatccgg aagccctgcc 420
tccatcagcc acctgacgcc ccctcccccg ccccgagaa agccctgaga tggcyccggg 480
agggcacggc tgtaggtgtg ttggttaaact ccgagctgga ggtcatcgga cccgaaatga 540
aggtcattgg aaaatcatga ggaaatcagg gctctggtta tggnacagg ttttnaaact 600
agc 603

<210> 70
<211> 1101
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (195)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1080)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1081)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1090)
<223> n equals a,t,g, or c

<400> 70

```

aattcggcac gagcacagct catgttttcc agcctgtgtg ggagcttggg ctgaagagag 60
attaagtgat agcctactta tggatcctgg agaattcttc agaaatccat gtgtaactca 120
ggtgcctatt tggttatgac aaaagatatg gctaattttt attttgaaaa gtttgaataa 180
acttagtttt ctctntttcc acttgcaaaag agttttgatg atggagacta ttttcctgtg 240
tggggcacat gccttggatt tgaagagctt tcactgctga ttagtggaga gtgcttatta 300
actgccacag atactgttga cgtggcaatg ccgctgaact tcactggagg tcaattgcac 360
agcagaatgt tccagaatth tcctactgag ttgttgctgt cattagcagt agaacctctg 420
actgccaatt tccataagtg gagcctctcc gtgaagaatt ttacaatgaa tgaaaagtta 480
aagaagtttt tcaatgtctt aactacaaat acagatggca agattgagtt tatttcaaca 540
atggaaggat ataagtatcc agtatatggt gtccagtggc atccagagaa agcaccttat 600
gagtgggaaga atttggatgg catthcccat gcacctaatg ctgtgaaaac cgcattttat 660
ttagcagagt tttttgttaa tgaagctcgg aaaaacaacc atcattttta atctgaatct 720
gaagaggaga aagcattgat ttatcagttc agtccaatth atactggaaa tatttcttca 780
tttcagcaat gttacatatt tgattgaaag tcttcaatth gttaacagag caaatttgaa 840
taattccatg attaaactgt tagaataact tgctactcat ggcaagatta ggaagtcaca 900
gattcttttc tataatgtgc ctggctctga ttcttcattc tgtatgtgac tatttatata 960
acattagata attaaatagt gagacataaa tagagtgtth ttcattggaaa agccttctta 1020
tatctgaaga ttgaaaaaaa taaatttact gaaatacaaa aaaaaaaaaa aaaaaaaatn 1080
nctcggtcgn caagggaatt c 1101

```

<210> 71

<211> 714

<212> DNA

<213> Homo sapiens

<400> 71

```

ggcagagaaa ctgtggcggg atagtthttcg ggtccttgct cagtgaacac cctcggctgg 60
gaagtcagtt cgttctctcc tctcctctct tcttgthtga acatgggtgc gactaaagca 120
gacagtgttc caggcactta cagaaaagtg gtggctgctc gagccccag aaagggtgctt 180
ggttcttcca cctctgccac taattcgaca tcagthtcat cgaggaaaga gcatgtcctt 240
tgcaacctga tcacacaaat gatgaaaaag aatagaactt tctcattcat ctttgaataa 300
cgtctccttg tttaccctgg tattctagaa tgtaaattta cataaatgtg tttgttccaa 360
ttagctthgt tgaacaggca ttttaattaaa aaatttaggt ttaaatttag atgttcaaaa 420
gtagthtga aatttgagaa tttgtaagac taattatggt aacttagctt agtattcaat 480
ataatgcatt gtttggtthc ttttaccaaa ttaagtgtct agttcttgct aaaatcaagt 540
cattgcattg tgthtctaatt acaagtatgt tgtatttgag atttgcttag attgtgttac 600
tgctgccatt tttattgggt tttgattatt ggaatgggtc catattgtca ctccttctac 660
ttgctthaaa aagcagagtt agattthtgc acattaaaaa attcagtatt aatt 714

```

<210> 72

<211> 2890

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (555)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2853)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2882)

<223> n equals a,t,g, or c

<400> 72

```
agggaattga gcacccggca gcggtctcag gccaaagcccc ctgccagcat ggccagcgag 60
ttcaagaaga agctcttctg gagggcagtg gtggccgagt tcctggccac gaccctcttt 120
gtcttcatca gcatcggttc tgccctgggc ttcaaatacc cgggtgggaa caaccagacg 180
gcggtccagg acaacgtgaa ggtgtcgctg gccttcgggc tgagcatcgc cacgctggcg 240
cagagtgtgg gccacatcag cggcgccac ctcaaccgg ctgtcacact ggggctgctg 300
ctcagctgcc agatcagcat cttccgtgcc ctcatgtaca tcacgcca gtgctgggg 360
gccatcgctg ccaccgccat cctctcaggc atcamctcct ccctgactgg gaactcgctt 420
ggccgmaatg acctggctga wgggtgaac ttccggccar ggctgggca tcgagatcat 480
cgggaccctc cagctgggtgc tatgctgct ggctactacc gaccggaggc gccgtgamct 540
tggtggctca gccgnccctt gccatcgcc tctctgtagc cctgggaca cctcctggct 600
attgactaca ctggctgtgg gattaaccct gctcgctcct ttggctccgc ggtgatcaca 660
cacaacttca gcaaccactg gattttctgg gtggggccat tcacggggg agccctggct 720
gtactcatct acgacttcat cctggcccca cgagcagtg acctcacaga ccgctgaag 780
gtgtggacca gcgccaggt ggaggagtat gacctggatg ccgacgacat caactccagg 840
gtggagatga agcccaaata gaaggggtct ggccgggca tccacgtakg gggcaggggc 900
agggcgggcg garggagggg agggtgaaat ccatactgta gacactctga caagctggcc 960
aaagtcaact ccccaagatc tgccagacct gcatggtcaa gcctcttatg ggggtgtttc 1020
tatctctttc tttctctttc tgtttctgg cctcagagct tcctggggac caagatttac 1080
caattcacc actcccttga agttgtggag gaggtgaaag aaagggaccc acctgctagt 1140
cgccctcag agcatgatgg gaggtgtgcc agaaagtccc ccctcgcccc aaagttgctc 1200
accgactcac ctgcgcaagt gcctgggatt ctaccgtaat tgctttgtgc ctttgggcac 1260
ggccctcctt cttttcctaa catgcacctt gctcccaatg gtgcttgag ggggaagaga 1320
tcccaggagg tgcagtggag ggggcaagct ttgctcctc agttctgctt gctcccaagc 1380
ccctgacctg ctcgactta ctgcctgacc ttggaatcgt ccctatatca gggcctsaag 1440
gacctccttc tgcaaagtgg cagggaccgg cagagctcta caggcctgca gcccctaagt 1500
gaaaacacag catgggtcca gaagacgtgg tctagaccag ggctgctctt tccacttgcc 1560
ctgtgttctt tccccagggg catgactgtc gccacacgcc tctgtgtaca tgtgtgcaga 1620
gcagacaggc taaaagcag agatcgacag acagccaggt agttggaact ttctgttccc 1680
tatggagagg ctccctaca cagggcctgc tattgcagaa tgaagccatt tagagggtga 1740
aggagaaata cccatgttac ttctctgagt tttagttggc ctttccatct atcactgcat 1800
tatcttgctc attcttcagt tctctactcc ctctgtcag ttagacaca ggtcaccatt 1860
atgctggtgt atgtttatca aagagcactt gagctgtctg aagcccaaag cctgaggaca 1920
gaaagacct gatgcaggtc agcccatgga ggagatgcc cttgctgggc ctgggggttt 1980
tccaaacct cagctgggtc tgaccaggat ggagcaagct cttcccttgc tcatgagctc 2040
ctgatcagag gattttgagc agctgaataa cctgcacagg cttgctgtat gaccctggc 2100
cacagccttc cctctgcatt gacctggagg ggagaggtca gccttgacct aatgaggtag 2160
ctatagttgc agcccaagga cagttcagag atcaggatca gctttgaagg ctggattcta 2220
tctacataag tcctttcaat tccaccaggg ccagagcagc tccaccactg tgcacttagc 2280
catgatggca acagaaacca agagacacaa ttacgcaggt atttagaagc agagggacaa 2340
ccagaaggcc cttaactatc accagtgcac cacatctgca cactctcttc tccattccct 2400
```

```

agcaggaact tctagctcat ttaacagata aagaaactga ggccacggt ttcagctaga 2460
caatgatttg gccaggccta gtaaccaagg ccctgtctct ggctactccc tggaccacga 2520
ggctgattcc tctcatttcc agcttctcag tttctgcctg ggcaatgcca ggggccagga 2580
gtggggagag ttgtgatgga ggggagaggg gtcacaccca cccctgcct gggtctaggc 2640
tgctgcacac caaggccctg catctgtctg ctctgcatat atgtctcttt ggagttggaa 2700
tttcattata tgtaagaaa ataaaggaaa atgacttgta aggtcaaaaa aaaaaaaaaa 2760
aaaaaaaaaa aaaaagggcg gccgttctag gaggatccaa gcttacgtac ggggtgcatgg 2820
gacgtcatag ctcttcttta agtgtcacc ccaattcaatt cattgggcct cgtttttaca 2880
antcgtgact                                     2890

```

<210> 73

<211> 2488

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (277)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (446)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2382)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2412)

<223> n equals a,t,g, or c

<400> 73

```

ggcagagtga ccacgctcca tactgggaga ggcttctggg tcaaaggacc agtctgcaga 60
gggatccctgt ggctggaags gaggaggctc cacacggccg ttgcagctac cgcagccagt 120
agagacaggg ttctgccatc ttggccaggc tgggtctcaa ctcctgacct ctggtgatcc 180
acccgcctcg gcctcccaaa gtgtagggat tacagggtgtg agccaccgca cccggccagg 240
gcacccctct ctctaacaca ggatctgggc atccagnac ggccatgacc cctccaaggc 300
tcttctgggt gtggctgctg gttgcaggaa cccaaggcgt gaacgatggg gacatgcggc 360
tggccgatgg gggcgccacc aaccagggcc gcgtggagat cttctacaga ggccagtggg 420
gcactgtgtg tgaacaacct gtgggnacct gactgatgcc agcgtcgtct gccgggccct 480
gggcttcgag aacgccaccc aggtctctggg cagagctgcc ttcgggcaag gatcaggccc 540
catcatgctg gacgaggtcc agtgcacggg aaccgaggcc tcaactggccg actgcaagtc 600
cctgggctgg ctgaagagca actgcaggca cgagagagac gctgggtgtg tctgcaccaa 660
tgaaaccagg agcaccacaa ccctggacct ctccaggagg ctctcggagg cccttggcca 720
gatctttgac agccagcggg gctgcgacct gtcctcagc gtgaatgtgc agggcgagga 780
cgccctgggc ttctgtggcc acacgggtcat cctgactgcc aacctggagg cccaggccct 840
gtggaaggag ccgggcagca atgtcaccat gagtgtggat gctgagtgtg tgcccatggg 900

```

```

cagggacttc tcaggtactt ctactcccga aggattgaca tcaccctgtc gtcagtcaag 960
tgcttccaca agctggcctc tgcctatggg gccaggcagc tgcagggcta ctgcgcaagc 1020
ctctttgcc a tctcctccc ccaggacccc tcgttccaga tgcccctgga cctgtatgcc 1080
tatgcagtgg ccacagggga cgccctgctg gagaagctct gcctacagtt cctggcctgg 1140
aacttcgagg ccttgacgca ggccgaggcc tggcccagtg tccccacaga cctgctccaa 1200
ctgctgctgc ccaggagcga cctggcggtg ccagcgagc tggccctact gaaggccgtg 1260
gacacctgga gctgggggga gcgtgcctcc catgaggagg tggagggcct ggtggagaag 1320
atccgcttcc ccatgatgct ccctgaggag ctctttgagc tgcagttcaa cctgtcccctg 1380
tactggagcc acgaggccct gtccagaag aagactctgc aggccctgga attccacact 1440
gtgcccttcc agttgctggc ccggtacaaa ggccgaacc tcaccgagga tacctacaag 1500
ccccggattt acacctcgcc cacttgaggt gcctttgtga cagacagttc ctggagtga 1560
cggaagtcac aactgggtcta tcagtccaga cgggggcctt tggtaaata ttcttctgat 1620
tacttccaag cccctctga ctacagatac taccctacc agtccttcca gactccacaa 1680
caccacagct tctcttcca ggacaagagg gtgtcctggt ccttgggtcta cctccccacc 1740
atccagagct gctggaacta cggcttctcc tgctcctcgg acgagctccc tgtcctgggc 1800
ctcaccaagt ctggcggtc agatcgacc attgcctacg aaaacaaagc cctgatgctc 1860
tgcgaagggc tcttcgtggc agacgtcacc gatttcgagg gctggaaggc tgcgattccc 1920
agtgccttgg acaccaacag ctggaagagm acctcctcct tcccctgccc ggcaggcact 1980
tcaacggctt ccgcacggtc atccgcccct tctacctgac caactcctca ggtgtggact 2040
agacggcgtg gcccagggt ggtgagaacc ggagaacccc aggacgccct cactgcaggc 2100
tccccctcct ggcttccttc ctctctgcaa tgaccttcaa caaccggcca ccagatgtcg 2160
ccctactcac ctgagcgctc agcttcaaga aattactgga aggttccac tagggtccac 2220
caggagtctt cccaccacct caccagtctt cagggtggtaa gcaccaggac gccctcgagg 2280
ttgctctggg atccccccac agcccctggt cagtctgccc ttgtcactgg tctgaggtca 2340
ttaaaattac attgaggttc ctaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaaagg 2400
gsggccgctc tngaggatcc ctcgaggggc ccaagcttac gcgtgcatgc gacgtcatag 2460
ctctctccct ataatggaat cgtattat 2488

```

<210> 74

<211> 711

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (696)

<223> n equals a,t,g, or c

<400> 74

```

ggcacgagcc ggagtggctg gtgggtggga tggaggcgac cttggagcag cacttggaaag 60
acactatcta tgtaaaattc aaaactggaa aagtataaag ggtacagaga gacacctgcc 120
tcccaccgat gtccctcagc ttccacttac cctccaggag aatgaagaat ccctccattg 180
ttggagtctt gtgcacagat tcacaaggac ttaatctggg ttgccgcggg accctgtcag 240
atgagcatgc tggagtgata tctgttctag ccagcaagc agctaagcta acctctgacc 300
ccactgatat tcctgtgggtg tgtctagaat cagataatgg gaacattatg atccagaaa 360
acgactggcat caggtggca gtgcacaaa tggcctcttg atgctcatat ctgttcttca 420
gcagcctgtc ataggaactg gatcctacct atgttaatta cttatagaa ctactaaagt 480
tccagtattt aggccattca tttaatgtgc attaggcact tttctgttta ttaagagtc 540
aattgctttc taatgctcta tggaccgact atcaagatat tagtaagaaa ggatcatgtt 600
ttgaagcagc aggtccaggt cactttgtat atagaatttt gctgtattca ataaatctgt 660
ttggagggaaa aaaaaaaaa aaaaaattac tgcggnccga caagggaatt c 711

```

<210> 75
 <211> 906
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc feature
 <222> (1)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (4)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (362)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (889)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (894)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (897)
 <223> n equals a,t,g, or c

<400> 75
 nctncccata accatgttcc catgtgggtg gtcgatgggg ctgcagaagg ccgggaggag 60
 ccgctggggc agcctggtgc tccggcatag acgtgtgtgg gtggtcaagg caggtcactc 120
 tgccctctg agcctcagtc ttctgccagt gacgcaggga gacggcactg actgcctccc 180
 aggagcgtcg gtggcctgca gaagatgcgc aggaagctgg gmctcgtgca ggtggagctg 240
 gaggaagacg gggcgctggt gtccaagctc ctggagacca tgcattctaac cggtgccgac 300
 ttsacaaaca ccttctactt gctgagctcc ttcccagtgg agctagagtc gccaggcctg 360
 gnsaattcc tggccaggct gatggagcag tgtgcctccc tggaggagct gaggctggcc 420
 ttccggcccm agatggatcc ccggcagcta tccatgatgc tgatgctggc gcagtcaaac 480
 ccgcagctgt tcgcgcttat gggcaccggg gcaggcatcg ccaggagct ggagcgtgtg 540
 gaggcagct ctcggctgga gcagctgagt gcggcagagc tgcagagcag gaaccagggc 600
 cactgggctg actggctaca ggcgtacaga gcccgctgg acaaggacct ggaaggcgt 660
 ggggacgctg ccgcctggca ggctkgagca cgtgcgctg atgcacgcca acaaccgaa 720
 gtacgtgctg aggaactaca ttgcgcaga atgccattcg aggttgccga gcgcggggat 780
 ttttcagagg tgcggcgggt gttgaaatta tttgagaccc tttaccattg cgaggcgggg 840

gccgccacaa gacggccgag gccacgggaa gccgacgggg gcggacggna aggnagnttt 900
 cttaca 906

<210> 76
 <211> 271
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc feature
 <222> (36)
 <223> n equals a,t,g, or c

<400> 76
 gaacactcta ctttatgcag gaatagcaga gatgantcat gggtgggaag acactagaat 60
 tcagccagga gaatatcatt aaaagaggga gaagggaaaa cagacttttt gtgtggtaca 120
 aaaacaaaac cctctgtatc attatgtgaa caacgggtgca aaaaagagga gacacagttt 180
 acccatgggt agctaactat gatagtgaag gttgccttga accttgtttt agaaaaatgg 240
 caagtgtggg tctcactctt ctagttcctg a 271

<210> 77
 <211> 673
 <212> DNA
 <213> Homo sapiens

<400> 77
 ttcggcacga gggtgaccag cggcgggtca cgtgacgcgg tgcctggcgc cgagcctccc 60
 aagatggcgg tgtgcatcgc ggtgattgcc aaggagaatt acccctccta cattcgcagc 120
 acccctacgg agaacgagct gaagttccac tacatggtgc acacatctct ggacgtggtg 180
 gatgagaaga tctccgcaat ggggaaggcc ctggctgacc agaggagct gtacctgggc 240
 ctgctctacc ccacggagga ctacaaggta tacggctacg tcaccaactc caaggtgaag 300
 tttgtcatgg tggtagattc ctccaacaca gcccttcgag acaacgaaat tcgcagcatg 360
 ttccggaagc tacacaactc ctacacagac gtgatgtgca accccttcta caaccgggg 420
 gaccgcatcc agtccagggc ctttgataac atggtgacgt cgatgatgat acaggtgtgc 480
 tgagtgaagt gtgctgccag ccatcgaga ggagcccgcg cacgactgtg gtggggccgt 540
 cggctctgtc tggttgccctc ttctgaatg ggacgcctgg ggctttcagg gcaggcagct 600
 gtgcatgttc tctcaactaa aggtcttgtg agaggaaaaa aaaaaaaaaa aaaaaaactc 660
 gggggggggc cg 673

<210> 78
 <211> 367
 <212> DNA
 <213> Homo sapiens

<400> 78
 cttgctttct ttcttacctc tgaaggagaa aagaaagttg ctacttacat gtttgaaaaa 60
 cctctcaaata ctactcagtc aaaagathtt atgcttcaat ttggtcatat gttaagagtt 120
 tagcttctaa actgatacct cagtagccca tagtttaaag gagtaaagag tacatggatg 180
 cttttggtac tactcagaag ctctgagttt ctgggccact gaaaccctga aaagtagcta 240
 aatacgttca cttgctatht taatccatca ctgtagatat gactcagtc ctttggtatt 300
 ttcccccaat ttgaaacaat ttaatgtgct gaaaagataa ctttctcctt ttttctttct 360

ttttctc

367

<210> 79

<211> 1344

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1319)

<223> n equals a,t,g, or c

<400> 79

```
gttctgagga gtttccccct tggcagccat gagccggcag ttctggtagt gactgctggg 60
ccctgctgga cagcgggtcg atgcagctcc tatgaggccc ctgccgccgg tcggcgatgt 120
ccggctggag ctgtcgccct cgccgccgct gctgccgggt ccggttggtga gcgggtctcc 180
agtcggctcc tctgggcgtc tcatggcctc tagcagctcc ctggtgcccg accggctgcg 240
cctgccgctc tgcttcttgg gtgtctttgt ctgctatttt tactatggga tcctgcagga 300
aaagataaca agaggaaagt atggggaagg agccaagcag gagacgttca cctttgcctt 360
aactttgggt ttcattcaat gtgtgatcaa tgctgtgttt gccaaagatct tgatccagtt 420
ttttgacact gccaggggtg atcgtaccgg gagctggctc tatgctgcct gttctatctc 480
ctatctgggt gccatgggtct ccagcaattc agcactacag tttgtcaact acccaactca 540
ggtccttggt aaatcctgca agccaatccc agtcatgctc cttgggggtga ccctcttgaa 600
gaagaagtac ccgttggtcca agtacctgtg tgtgctgtta attgtggctg gaggggccct 660
tttcatgtac aaacccaaga aagttgttgg gatagaagaa cacacagtcg gctatggaga 720
gctactcttg ctattatcgc tgaccctgga tggactgact ggtgtttccc aggaccacat 780
gcgggctcat taccaaacag gctccaacca catgatgctg aacatcaacc tttggtcgac 840
attgctgctg ggaatgggaa tcctgttcac tggggagctc tgggagttct tgagctttgc 900
tgaaagggtac cctgccatca tctataacat cctgctcttt gggctgacca gtgccctggg 960
tcagagcttc atctttatga cggttgtgta ttttggctcc ctgacctgct ccatcatcac 1020
tacaactcga aagttcttca caattttggc ctctgtgatc ctcttcgcca atcccatcag 1080
ccccatgcag tgggtgggca ctgtgcttgt gttcctgggt cttggtcttg atgccaagtt 1140
tgggaaagga gctaagaaga catcccacta ggaagagaga gactacctcc acatcaagaa 1200
tatttaagtt attatctcaa acagtacat ctcttgggaa aatggactta ataggaatat 1260
gggactgagt tccagtcttt tttaataaaa taaaatcaag caaaaaaaaa aaaaaaanc 1320
ccgagggggg gcccggaacc caat 1344
```

<210> 80

<211> 3748

<212> DNA

<213> Homo sapiens

<400> 80

```
gccgatttga accgaggatt tgggcggcag gaagagccgc ggcgtaacgg cagccatctt 60
gtttgtttga gtgaatcgga aaggaggcgc cggctgtggc ggcggcgagg gctgctcgga 120
agctacacct cgcaagggtc cccccctttc cccacccccct ccccgaccc ttttccccctc 180
cccgggcccac ccagcccgcc caactcccag cggagagcaa ggttttcttc tgttttcata 240
gccagccaga acaatgttct acgcacattt tgttctcagt aaaagagggc ctctggccaa 300
aatttggtta gcggccatt gggataagaa gctaaccaaa gcccatgtgt tcgagtgtaa 360
tttagagagc agcgtggaga gtatcatctc accaaagggtg aaaatggcat tacggacatc 420
aggacatctc ttactgggag tagttcgaat ctatcacagg aaagccaaat accttcttgc 480
```



```

agactgtaat gaagcattca ttaagataaa gatggctttt cggccagggtg tggttgacct 540
gcctgaggaa aatcgggaag cagcttataa tgccattact ttacctgaag aatttcatga 600
ctttgatcag ccactgcctg acttagatga catcgatgtg gcccagcagt tcagcttgaa 660
tcagagtaga gtggaagaga taaccatgag agaagaagtt gggaacatca gtattttaca 720
agaaaatgat tttggtgatt ttggaatgga tgatcgtgag ataatgagag aaggcagtg 780
ttttgaggat gacgacatgt tagtaagcac tactacttct aacctcctat tagagtctga 840
acagagcacc agcaatctga atgagaaaat taaccattta gaatatgaag atcaatataa 900
ggatgataat tttggagaag gaaatgatgg tggaatatta gatgacaaac ttattagtaa 960
taatgatggc ggtatctttg atgatcccc tgccctctct gaggcagggg tgatgttgcc 1020
agagcagcct gcacatgacg atatggatga ggatgataat gtatcaatgg gtgggcctga 1080
tagtcctgat tcagtggatc ccgttgaacc aatgccaaac atgactgac aaacaacact 1140
tgttccaaat gaggaagaag catttgcat ggagcctatt gatataactg ttaaagaaac 1200
aaaagccaag aggaagagga agctaattgt tgacagtgtc aaagagttgg atagcaagac 1260
aattagagcc caacttagtg attattcaga tattgttact actttggatc tggcaccgcc 1320
accaagaaat tgtggaatag gaaagagaca ggagggagtag aaaaactgtt ttctttacct 1380
gctcagcctt tgtggaataa cagactactt aagctcttta cacgtgtctt tacaccgctt 1440
gtaccagaag accttagaaa aaggaggaaa ggaggagagg cagataattt ggatgaattc 1500
ctcaaagaat ttgaaaatcc agaggttcct agagaggacc agcaacagca gcatcagcag 1560
cgtgatgtta tcgatgagcc cattattgaa gagccaagcc gcctccagga gtcagtgatg 1620
gaggccagca gaacaaacat agatgagtca gctatgcctc caccaccacc tcagggagtt 1680
aagcgaanaag ctggacaaat tgaccagag cctgtgatgc ctctcagca ggtagagcag 1740
atggaaatac cacctgtaga gcttccccc gaagaacctc caaatatctg tcagctaata 1800
ccagagttag aacttctgcc agaaaaagag aaggagaaa agaaaggaaa agaagatgat 1860
gaagaggaag aggatgaaga tgcacaggg ggcatcaag atcaggaaga aagaagatgg 1920
aacaaaagga ctacagcagat gcttcatggt ctacagcgtg ctcttgctaa aactggagct 1980
gaatctatca gtttgcctga gttatgtcga aatacgaaca gaaaacaagc tgccgcaaag 2040
ttctacagct tcttggttct taaaaagcag caagctattg agctgacaca ggaagaaccg 2100
tacagtgaca tcacgcaac acctggacca aggttccata ttatataagg agctagaagc 2160
attatagcta gtgtttgatt cactagtgtc tacaaattgc ccccatgtgt aggggacaca 2220
gaaccctttg agaaaactta gatttttgtc tgtacaaagt ctttgccttt ttcttcttc 2280
atTTTTTTcc agtacattaa atttgtcaat ttcatctttg agggaaactg attagatggg 2340
ttgtgtttgt gttctgatgg agaaaacagc accccaagga ctcagaagat gattttaaca 2400
gttcagaaca gatgtgtgca atattggtgc atgtaataat gttgagtggc agtcaaaagt 2460
catgattttt atcttagtct ttcattactg cattgaaaag gaaaacctgt ctgagaaaat 2520
gcctgacagt ttaattttaa actatggtgt aagtctttga caagaaaaaa aaacaaacaa 2580
acacttcttt ccatcagtaa cactggcaat ctctctgtta accactctcc ttagggatgg 2640
tatctgaaac aacaatggtc acctcttga gattcgtttt aagtgtatt ccataatgag 2700
cagaggtgta cgcgaaattg tgttatgact gatagccttc agctacaaaa agataggact 2760
gacctggttt aaagtgttct attttgtaaa tcattccatt tgagtctttc tgatgaactt 2820
ggctatactg aaatctgtta ttttagtgag gtcctaaaat gagcaaagct aggcctgatt 2880
agagtagagt gactattaaa aaacataact ttctaggagc tataaatcaa agttttaaaa 2940
agatgtttgg atatatttga gtattccgat catgaaaaca gaaattgcc tgccactac 3000
aaggacagac tgatgggaaa ttatgcacct ggtcaactta gcttttaagc agacgatgct 3060
gtaaaaacta acggttctc tgatatattat tgtaagtttt agtactgac tccttttcca 3120
gtgctgcaca ctctggttt ggaactttac tagcgttgca acgaaatcct atatccagtt 3180
tcctgtaatt taattgaaga aaaatacatc caaataaaga ctttattatt aacagaccag 3240
atagcatcag aaatcatgtg actgttatga ttatcagaat atgtcttaac tttttagggc 3300
aaagttaaca ctgaaagttc tagcttaagt ttgtaaaact ttgtgggaaa aaaaaatcac 3360
ttttgaaact cagacttcag tgtataccca ataattttaa attatgtgaa atgtttttaa 3420
tttgtgaact cgtaattact gttttaatga ttcagtttct tcagagtggg aattgtataa 3480
aattgctatt gcagctttat attcaatatg atgtgcctgt aaaccaagga gttttccccg 3540

```

```

tttgtaaaaa gacattgtag ataattgaat gtttgatttt agaaagggtca ttagtttctt 3600
gttacacatt ttgttagtct ggtttttggt gcttatcggt tttaatattg ttcttgaaaa 3660
tagttgatgc tatgttatgt ataacttttc taataaaagt tgtgttataa gctgtaaaaa 3720
aaaaaaaaaa aaaaaaaaaa aaaaaaac 3748

```

<210> 81

<211> 1891

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1869)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1879)

<223> n equals a,t,g, or c

<400> 81

```

gttgctgtca tttgggctta ctggcttgga ctgaagggtac gtagagaata caggaaattc 60
ttcagagcca atgctggaaa gaaaatctat gagtttacgc ttcagagaat tgtgcaaaaa 120
tacttcttgg aaatgaaaaa taagatgcct tccttatctc caatagacaa gaattggccc 180
tcaagacctt acttattctt ggattctact cacaaggagc taaaaaggat tttccacttg 240
tggagggtgta aaaaatacag ggaccaattc acagaccagc agaaacttat ttatgaagag 300
aaactagaag ccagtgaact cttcaaagac aagaaggctt tatacccatc tagtggtggg 360
caaccattcc aaggggctta cctggaaatc aacaagaacc ccaagtataa gaaactcaaa 420
gatgccattg aagaaaagat catcattgct gaagtcgtga acaaaattaa ccgtgctaata 480
gggaagagta catctcggat tttcctctta acaaacaata atctccttct tgctgaccaa 540
aagctctggac aaatcaagtc agaggttcca ytggtggatg tgaccaagggt atcaatgagc 600
tcacaaaatg atggcttctt cgccgtccac ctcaaagagg gctcagaagc agctagtaaa 660
ggagactttc tcttcagcag tgatcacctg attgaaatgg ccaccaagct ctatcgca 720
actctcagcc aaaccaaaaca gaagctcaat attgagattt ccgatgagtt cctgggtacag 780
ttcagacagg acaaagtatg tgtgaagttt attcagggaa accagaaaaa tgggagtgtc 840
ccaacatgta aacgaaaaaa caaccgtctc cttgaagttg ctgtccctta actggcgcc 900
cctctctact ttcattggact tgttcctttg taatagtgc aatttggttt gttttatttg 960
gggttcattg tatgtttggg aatcaccaaa ggcttttaga gttctttggc aaaataaaaa 1020
tatttgacta atcaattttt attattggaa tagttttaac ctttcaaata catgttctgt 1080
cctggagcag gattgtagaa actaacagtg tctattttca tgtctgatgt gttcttccct 1140
tagtcatcat gttaggtctg tgtaccctaa atcagcatat tactcataaa tcattaatta 1200
atataagcat aggaaatggt cttaaaagat actgcattca ttcacagat atttattcca 1260
tgccactctt atgctaggca ctgtgctaga tggatgaaa acttattagg aacctttttg 1320
tttttgagac cattgcattc tggctgggtt gtgctgggtt aacgacatct aagaagggtt 1380
agaaatggtg agacaaaac aataactgtt aatgatggac agcattatta ggaacctgt 1440
agtatgatat ttaacaatat aggttcaag aagggtcggc cctaagaggg ggcagaaatg 1500
aatgaccagg ttaaatccct ctacatgtg tttctgtttg aaaaaaagaa aactgacatt 1560
tgaacaggac ttttaatttg tttaaaactt ttgtaacagt agaaaataga 1620
agtcattctt attttagaaa aagtgcaga agcagtcagg taagattata tgtttctgtt 1680
tctggtaaat accatatatg atcctcgaat tgataaatat tccagaatat tgttttcacc 1740
caaatgtgag tagatatttt aaacacctaa caaagtaaag ggctaaaagc cattcagata 1800

```

gcagtaaaac attctgtatg atgtgcaata aaacatccaa gatctttttt gaaagtgwka 1860
 tttccgttna agtccccnt taggaccccc g 1891

<210> 82

<211> 1954

<212> DNA

<213> Homo sapiens

<400> 82

```

ttcagtgtct ggcacactga gacacctcca agaaggagat tgatgcatca gggttcagttt 60
aacctggaat atctgactac ccctgaatcc acccagaaaag ggggccaac acccttgtcc 120
atztatgggt attttttttc gaagttatta agcatattcc ttttccacga acctcttctg 180
tactttgatt gtaataggtt ggctcttaca cccattccaa atgcagttta tttttagacc 240
cgattgcaaa tagtgatgta gttttaacca gtatggatta gttcagggat gaactgctcc 300
ctccagcctt actggctctg atccacaggg ttttgttttg ttttgttttg tttttgttt 360
aagtcgagat ataaaaactg aacacgataa cacttactct taaatcaagc atcaacactt 420
tttccctggt agaattcttt gcatttttgt gtttgtaaca gaaacgcctt aagacactat 480
gtttgggaat ataggaaact atgtgtgtcc caaggaaatc cctgtaaatt taactcacct 540
acaaaaggct ttttccccgc ctttggttgt taacggcatt cctgaaagcc acatgtgttt 600
attcattggg cttgttctta tcagcaaata ggtttctggt ttttatgact tttgtctta 660
ttttatkttt cctacatttc tttttttttt tttttccytt agaatgccck gggraatatat 720
ttaagtggka atgraaaata gtaatcatag taaaacgcaa cargargraa accmacccaa 780
accagtgaag ttttttagaa cttttagaag ggtggtcttt attcaggttt tactgtaatg 840
gtaaggattg actcaagaga cagtattagt aaatttattg tgtatggatc aaaagtgaat 900
aatgtatgaa tgagagctgt aagaaggatt tttattttgt tataatttag ttaccatttt 960
cagtgttatt tcaaagggtc tttgaagaat tttggggcag ggcacagat tagagtttta 1020
aaatttgagt attttgata tcagtgttcc tcatgaagat atacatggat attcaatttt 1080
gatggcttcc agatttgtaa gattktatgt tgtatatacc attctattaa gaaacatgtc 1140
cactgtgctt tcaaacatag ataaagcatg ataaagatta ttatttaaga tatacttgta 1200
tttatacctc agatattctt ttgggttttg tacctcaagg ctttttctt cttattgtaa 1260
atacacttta cgtgaataca gtctaagtga agaaaataaa taaaaggaag aggtttataa 1320
cttgctctat atctgtacag attataatca ataagtgcac tattattaaa tgtttaaagt 1380
aagggaagag tctgggctgc cttccttaat attgcatctc actcccaccc ttaaaaccac 1440
agattgcaaa gcatagcatt ttagcatcaa ctacaatcaa aagagcgatt tgctgaagga 1500
aaaatcggac tgcaaatcat tccaaggcca aactgcaact gagccacca ctcccaaaca 1560
ggaaaccctg gtgaagggtc aggaagcacg gagattctct ccaacaaagg tccagttagg 1620
aaacgacgct gagaggatga cgacaacgtg caacagcaga aagatgcttg caagcagagt 1680
cagggtcacc agtgaatgcc acaaaagttc tctttccac tgtttaattt gacaagagaa 1740
gaatttgaag gatatgaaca ttttcaagaa ctctgctgag gtcacttaga gcgccatcac 1800
aacttatttg tgtgactaat tgcctagatt gtaagctctt tgagggcagg gcttgtctct 1860
tacacatctt tataatcccc tgcagcggct ttcagtattt tgtacttgta ggcacctaata 1920
aaatttatta tttgctatac tgaaaaaaaa aaaa 1954

```

<210> 83

<211> 936

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (895)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (930)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (936)

<223> n equals a,t,g, or c

<400> 83

```

aattcggcac gagctggagg cagagcagtc ctctctgggg agcctgaagc aaacatggat 60
caagaaactg taggcaatgt tgcctgttg gccatcgtca ccctcatcag cgtgggccag 120
aatggattct ttgccataa agtggagcac gaaagcagga ccagaatgg gaggagcttc 180
cagaggaccg gaacacttgc ctttgagcgg gtctacactg ccaaccagaa ctgtgtagat 240
gcgtacccca ctttcctcgc tgtgctctgg tctgcggggc tactttgcag ccaagttcct 300
gctgcgtttg ctggactgat gtacttgttt gtgaggcaaa agtactttgt cggttaccta 360
ggagagagaa cgcagagcac ccctggctac atatttgggg aaacgcatca tactcttctt 420
gttcctcatg tccgttgctg gcatattcaa ctattacctc atcttctttt tcggaagtga 480
ctttgaaaac tacataaaga cgatctccac caccatctcc cctctacttc tcattcccta 540
actctctgct gaatatgggg ttggtgttct catctaatac atacctacaa gtcatacata 600
ttcagctctt gagagcattc tgctcttctt tagatggctg taaatctatt ggccatctgg 660
gcttcacagc ttgagttaac cttgcttttc cgggaacaaa atgatgtcat gtcagctccg 720
ccccttgaac atgaccgtgg ccccaaattt gctattccca tgcattttgt ttgtttcttc 780
acttatcctg ttctctgaag atgttttgtg accaggtttg tgttttctta aaataaaatg 840
cagagacatg ttttaagctg aaaaaaaaaa aaaaaaaacc cggggggggc ccggnaccaa 900
ttcgcccaaa agggggcgat taaaatcccn ggccgn 936

```

<210> 84

<211> 1513

<212> DNA

<213> Homo sapiens

<400> 84

```

tctaaactag tggatccccg ggctgcagga attcggcaca ggctctcaga ggctaagaag 60
gtggagaccg gagaagctgt gaggttcttt agcgtcacct ccctcactgg gcagcatggg 120
ggagaagtca gagaactgtg gggttccaga ggatctgtta aatggtttga aggttacaga 180
tactcaggaa gccgagtgtg ctggccctcc agttcctgat cccaaaaatc agcattccca 240
gagtaagctg ctgagggatg atgaggccca tctccaggag gaccaggag aagaggagt 300
ttttcatgac tgcagtgcct catttgagga ggagccagga gcggacaagg ttgagaacaa 360
atctaataaa gatgtgaatt cctctgaact agatgaagaa tacctaataa aactggaaaa 420
aaacatgtcg gatgaagaga aacagaaaag aagagaagag agcactagac taaaggagga 480
gggaaatgaa cagttaaga aaggagatta tatagaagct gaaagttctt atagtcgagc 540
cctcgaaatg tgcccatcct gcttccaaaa ggagaggtcg attctatttt caaatagagc 600
tgagcaagg atgaaacagg acaagaaaga aatggccatc aatgactgca gcaaagcaat 660
tcaattaaac ccagctata tcagggcaat attgaggaga gcagagtgt atgagaagac 720
ggacaagta gatgaagccc tggaagacta taaatctata ttagaaaaag atccatcaat 780
acatcaagca agagaagctt gtatgagatt acctaagcaa attgaagaac gtaatgaaag 840
actaaaagaa gagatgttag gtaaattaaa agatcttggg aacttggttc tccgacctt 900

```

```
tgggctctcc acggaataatt tccagatcaa acaggattcc tctaccggct cgtactccat 960
caatttcggt caaaatccaa ataataacag ataacaaaga taacaaaagc tttacaagct 1020
gacttggaat tgtgtgctgc ttgctgttag ctaggggaaa ggccctgcca atgtttaact 1080
tttaaaagca tcttatctaa aagaaaggct atccagtaga gccagtgct cccttgctccc 1140
tcttttatga tcagggtgaa atgtacttcc tgatgtaatg aacctaatgt gatttccatt 1200
ttaagggtgg gtctgtgcag ctgggtgtccc cgattctggc tgcctatgt ccaggaagaa 1260
gccatttgt tgaggctgac cttcctgac atacacacac acagcccagc aaaagcctct 1320
cctgaaccaa acaaacctgt tgggtgggag actgcccaga catgattgat gacgggttcc 1380
cgctgtgtgt cccctccctg atcacacagc taacgaggct gcctccagca tttcctgatt 1440
tcctctgtgg taataaaagc tttctgtgct taacaaaaaa aaaaaaaa aaacttcgag 1500
ggggggggccc ggt 1513
```

<210> 85

<211> 1298

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (3)

<223> n equals a,t,g, or c

<400> 85

```
gtngggcggc tgctgctccg ggccctgggca cagcaagcgg cgacgtcaag ctcccgggg 60
tggcgcggtt ggcgggggca gtcccagagc tgaggaggct ggcgaggct acaacagtga 120
ggacgagtat gaggcggctg cagcacgcat cgaggctatg gaccctgcca ctgtcgagca 180
gcaggagcat tggtttgaag aggccctacg agacaagaag ggcttcatca tcaagcagat 240
gaaggaggat ggcgcctgtc tcttccgggc tgtagctgac cagggtgtatg gagaccagga 300
catgcatgag gttgtgcgaa agcattgcat ggactatctg atgaagaatg ccgactactt 360
ctccaactat gtcacagagg actttaccac ctacattaac aggaagcggg aaaacaattg 420
ccatggcaac cacattgaga tgcaggccat ggcagagatg tacaaccgtc ctgtggagg 480
gtaccagtac agcacagaac ccatcaacac attccatggg atacatcaa acgaggacga 540
acccattcgt gttagctacc atcggaatat ccactataat tcagtgggtga atcctaacia 600
ggccaccatt ggtgtggggc tgggcctgcc atcattcaaa ccagggtttg cagagcagtc 660
tctgatgaag aatgccataa aaacatcgga ggagtcattg attgaacagc agatgctaga 720
agacaagaaa cgggccacag actgggaggc cacaatgaa gccatcgagg agcagggtggc 780
tcgggaatcc tacctgcagt ggttgcgagg tcaggagaaa caggctcgcc aggtccgagg 840
ccccagccag ccccgaaaag ccagcgccac atgcagttcg gccacagcag cagcctccag 900
tggcctggag gagtggacta gccgggtccc gcggcaggag tttcagcctc gtcacctgag 960
caccctgagc tgcattgctga attgggcatg aagccccctt cccagggcac tgttttagct 1020
cttgccaaac ctcttcgccc ctgtgcgcca gggtacaagc agtcagttct cggcaggggc 1080
cgaccgggca acttcccccc ttgtgtccct ctaccctgct ttggagtkcc gggccctcat 1140
tcagcagatg tccccctctg cctttgggtc gaatgactgg gatgatgatg agatcctagc 1200
ttcgggtgct gcagtgctcc aacaggaata cctagacagt atgaagaaaa acaaagtga 1260
cagagaccgg cccccagaca agagttgatg gagaccga 1298
```

<210> 86

<211> 2009

<212> DNA

<213> Homo sapiens

<220>
<221> misc feature
<222> (1955)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1959)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (2008)
<223> n equals a,t,g, or c

<400> 86

gtgttcgtcc	gcttgtcact	gaattggacc	ctgatgctcc	cataagacag	aaaatgcccc	60
ttgatgatct	ggatagagaa	gatgaagtta	gattactcaa	atatctcttt	actctaatacc	120
gtgctggaat	gacagaagag	gcacaacgac	tctgtaaacg	ctgtgggtcaa	gcatggagag	180
ctgcaacact	tgaaggctgg	aaactgtacc	atgaccctaa	tgtaaatgga	ggaacagaat	240
tagaacctgt	tgaagggaat	ccatatagac	gcatttggaa	aataagttgc	tgagagaatgg	300
cagaagatga	gctttttaat	agatacgaga	gagcaattta	tgacagcttta	agtgggaatc	360
ttaagcagct	gcttcctgtc	tgtgacacct	gggaagacac	agtttggggc	tacttccggg	420
tgatggtgga	cagtctggta	gaacaggaga	tccagacatc	agtagcaact	ctggatgaaa	480
ctgaagaact	ccctagagaa	tatctgggag	caaactggac	gttagaaaag	gtttttgagg	540
aacttcaagc	tactgacaaa	aagagagttc	tggaagagag	atcaagaaca	ttatcatata	600
gttcaaaaag	ttcttatcct	gggagacatt	gatggtttga	tggtatgagt	tagcaaatgg	660
ctttccaaaa	gcagaaacaa	tctacctgga	cacctgcttc	gctttatgac	tcaccttatt	720
ttgtttttcc	gtactctggg	actacagacc	aaggagggaag	tttctattga	agttttaaag	780
acatacatat	agcttttaat	aagagagaaa	catacaaata	ttatagcatt	ttatacctgt	840
catttgccct	aagacctagc	tggtgcccag	tatgcattat	tttggaagag	tggtacagaa	900
tttgaacagc	gccaccattg	cctggagttg	gctaaagaag	cagatttgga	tggtgcaaca	960
ataacaaaaa	ctgtagttag	gaatatctga	aagaaagata	atggtgaatt	tagtcatcat	1020
gacctggccc	cagccctaga	tactggcact	actgaggagg	atcgtttaaa	aattgatgta	1080
attgactggg	tggtatttga	cccagcgag	agggcagaag	cactgaaaca	aggcaatgca	1140
attatgagaa	aaytcttggc	atcaaaaaag	cacgragctg	caaaagaagt	atttgtgaaa	1200
attcctcagg	attctatagc	agaaatctat	aatcagtgcg	aggaacaagg	aatggaaagt	1260
ccacttcctg	ctgaagatga	taatgctatc	cgagaacatt	tgtgcatcar	agcttatattg	1320
gaagcccatg	aaacctttaa	tgagtggttt	aagcatatga	attcagttcc	acaaaaacct	1380
gctttgatac	ctcaaccaac	ttttactgag	aaagtggctc	atgaacacaa	agaaaagaaa	1440
tatgaaatgg	attttggtat	ttggaaaggg	catttggtatg	ccctaactgc	tgatgtgaag	1500
gagaaaatgt	ataacgtctt	gttggttggt	gatggagggt	ggatggtgga	tgtagagag	1560
gatgccaaa	agaccatga	aagaacacat	caaatggtct	tactgagaaa	gctttgtctg	1620
ccaatgttgt	gttttctgct	tcatacgata	ttgcacagta	ctggctcagta	tcaggaatgc	1680
ctacagttag	cagatattgt	atcctctgag	cgccacaaac	tgtacctggt	attttctaag	1740
gaagagctaa	ggaagtgtg	gcagaagctc	agagagtcct	ctctaagtct	cctagaccag	1800
ggacttgacc	cattagggtg	tgaaattcag	ttatagttta	atcttcgtta	tctcactaat	1860
tttcatgata	aatgaagttt	ttaataaaaat	atacttggtta	ttagtaaaaa	aaaaaaaaaa	1920
agggcgggcg	ctctagagga	tccctcgagg	ggccncaant	tacgcgtgca	tgcgacgtca	1980
tagctctctc	cctatagtga	gtcgtacng				2009

<210> 87
 <211> 534
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc feature
 <222> (466)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (477)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (526)
 <223> n equals a,t,g, or c

<400> 87
 ggacgccgac gtgcagttcc tggcctcggt gctgccccca gacacggatc ctgcgttctt 60
 cgagcacctt cgggccctcg actgctccga ggtgacggtg cgagccctgc ccgagggctc 120
 cctcgccctc cccggagtgc cgctcctgca ggtgtccggg ccgctcctgg tggtcagct 180
 gctggagaca ccgctgctct gcctggtcag ctacgccagc ctggtggcca ccaacgcagc 240
 gcggcttcgc ttgatcgag ggccagagaa gcggctgcta gagatgggcc tgaggcgggc 300
 tcaggggcccc gatgggggcc tgacagcctc cacctacagc tacctgggcg gcttcgacag 360
 cagcagcaac gtgctagcgg gccagctgcg aggtgtgccg gtggccggga ccctggccca 420
 ctccctcgtc acttcctttt caggcagcga ggtgcccctg acccgntgtt ggggcanaag 480
 tttgtgaagg gccttggggtt gacctggggg caaagccaag ttttgnttga gcaa 534

<210> 88
 <211> 4302
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc feature
 <222> (1015)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (4270)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (4274)
 <223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (4296)

<223> n equals a,t,g, or c

<400> 88

```
gtcagtaacc agcacaacat taatagaaat ttttaagtgc actggagcag aaggacccac 60
gggtggcacct ctccctttct ccacggacat cggacatcct caaaatcaga ctgtcagggtg 120
ggcagaagaa atccagacta gtagaccaca aaccataact gaacaagact ctaacaagaa 180
ttcttcaaca gcagaaatta acgaaacaac aacctcatct actgattttc tggctagagc 240
ttatggtttt gaaatggcca aagaatttgt tacatcagca ccaaaaccat ctgacttgta 300
ttatgaacct tctggagaag gatctggaga agtggatatt gttgattcat ttcacacttc 360
tgcaactact caggcaacca gacaagaaag cagcaccaca tttgtttctg atgggtccct 420
ggaaaaacat cctgagggtgc caagcgctaa agctgttact gctgatggat tccaacagt 480
ttcagtgatg ctgcctcttc attcagagca gaacaaaagc tccctgatc caactagcac 540
actgtcaaat acagtgtcat atgagaggtc cacagacggt agtttccaag accgtttcag 600
ggaattcgag gattccacct taaaacctaa cagaaaaaaa cccactgaaa atattatcat 660
agacctggac aaagaggaca aggatttaat attgacaatt acagagagta ccatccttga 720
aattctacct gagctgacat cggataaaaa tactatcata gatattgatc atactaaac 780
tgtgtatgaa gacattcttg gaatgcaaac agatatagat acagaggtag catcagaacc 840
acatgacagt aatgatgaaa gtaatgatga cagcactcaa gttcaagaga tctatgaggc 900
agctgtcaac ctttctttta ctgaggaaac atttgagggc tctgctgatg ttctggctag 960
ctacactcag gcaacacatg atgaatcaat gacttatgaa gatagaagcc aactnagatc 1020
acatgggctt tcacttcaca actgggrtcc ctgctcctag cacagaaaca gaattagacg 1080
ttttacttcc cacggcaaca tccctgccaa ttccctcgtaa gtctgccaca gttattccag 1140
agattgaagg aataaaagct gaagcaaaaag ccctggatga catgtttgaa tcaagcactt 1200
tgtctgatgg tcaagctatt gcagacccaaa gtgaaataat accaacattg ggccaatttg 1260
aaaggactca ggaggagtat gaagacaaaa aacatgctgg tccttctttt cagccagaat 1320
tctcttcagg agctgaggag gcattagtag accatactcc ctatctaagt attgctacta 1380
cccaccttat ggatcagagt gtaacagagg tgctgatgt gatggaagga tccaatcccc 1440
catattacac tgatacaaca ttagcagttt caacatttgc gaagttgtct tctcagacac 1500
catcatctcc cctcactatc tactcaggca gtgaagcctc tggacacaca gagatcccc 1560
agcccagtg tctgccagga atagacgtcg gctcatctgt aatgtcccca caggattctt 1620
ttaaggaaat tcatgtaaat attgaagcga ctttcaaacc atcaagttag gaataccttc 1680
acataactga gcctccctct ttatctcctg acacaaaatt agaaccttca gaagatgatg 1740
gtaaacctga gttattagaa gaaatggaag cttctccac agaacttatt gctgtggaag 1800
gaactgagat tctccaagat ttccaaaaca aaacckatgg tcaagtttct ggagaagcaa 1860
tcaagatgtt tcccaccatt aaaacacctg aggctggaac tgttattaca actgccgatg 1920
aaattgaatt agaaggtgct acacagtggc cacactctac ttctgcttct gccacctatg 1980
gggtcgaggc aggtgtggtg ccttggtctaa gtccacagac ttctgagagg cccacgcttt 2040
cttcttctcc agaaataaac cctgaaactc aagcagcttt aatcagaggg caggattcca 2100
cgatagcagc atcagaacag caagtggcag cgagaattct tgattccaat gatcaggcaa 2160
cagtaaacc tgtggaattt aatactgagg ttgcaacacc accattttcc cttctggaga 2220
cttctaataa aacagatttc ctgattggca ttaatgaaga gtcagtggaa ggcacggcaa 2280
tctatttacc aggacctgat cgctgcaaaa tgaaccctgt ccttaacgga ggcacctgtt 2340
atcctactga aacttcctac gtatgcacct gtgtgccagg atacagcgga gaccagtgtg 2400
aacttgattt tgatgaatgt cactctaata cctgtcgtaa tggagccact tgtgttgatg 2460
gttttaacac attcagggtgc ctctgccttc caagttatgt tggtgactt tgtgagcaag 2520
ataccgagac atgtgactat ggctggcaca aattccaagg gcagtgtac aaatactttg 2580
cccatcgacg cacatgggat gcagctgaac gggaatgccg tctgcagggt gcccatctca 2640
caagcatcct gtctcacgaa gaacaaatgt ttgttaatcg tgtgggcat gattatcagt 2700
```


ggataggcct caatgacaag atgtttgagc atgacttccg ttggactgat ggcagcacac 2760
tgcaatacga gaattggaga cccaaccagc cagacagctt cttttctgct ggagaagact 2820
gtgttgtaat catttggcat gagaatggcc agtggaatga tgttccctgc aattaccatc 2880
tcacctatac gtgcaagaaa ggaacagttg cttgcggcca gccccctggt gtagaaaatg 2940
ccaagacctt tggaagatg aaacctcgtt atgaaatcaa ctccctgatt agataccact 3000
gcaaagatgg tttcattcaa cgtcaccttc caactatccg gtgcttagga aatggaagat 3060
gggctatacc taaaattacc tgcatgaacc catctgcata ccaaaggact tattctatga 3120
aatactttaa aaattcctca tcagcaaaagg acaattcaat aaatacatcc aaacatgatc 3180
atcgttggag cgggaggtgg caggagtcga ggcgtgatc cctaaaatgg cgaacatgtg 3240
ttttcatcat ttcagccaaa gtcctaactt cctgtgcctt tcctatcacc tcgagaagta 3300
attatcagtt gggttggtt tttggaccac cgttcagtca ttttgggttg ccgtgctccc 3360
aaaacatttt aatgaaagt attggcattc aaaaagacag cagacaaaat gaaagaaaat 3420
gagagcagaa agtaagcatt tccagcctat ctaatttctt tagttttcta tttgcctcca 3480
gtgcagtcca tttcctaatt tataccagcc tactgtacta tttaaaatgc tcaatttcag 3540
caccgatggc catgtaaata agatgattta atgttgattt taatcctgta tataaaataa 3600
aaagtcacaa tgagtgtggg catattttaat gatgattatg gagccttaga ggtctttaat 3660
cattggttcg gctgctttta tgtagttagt gctggaaatg gtttcacttg ctctttgact 3720
gtcagcaaga ctgaagatgg cttttccttg acagctagaa aacacaaaat cttgtaggtc 3780
attgcaccta tctcagccat aggtgcagtt tgcttctaca tgatgctaaa ggctgcgaat 3840
gggacctga tggaactaag gactccaatg tcgaactctt ctttgctgca ttcctttttc 3900
ttcacttaca agaaaggcct gaatggagga cttttctgta accaggaaca ttttttaggg 3960
gtcaaagtgc taataattaa ctcaaccagg tctacttttt aatggctttc ataacactaa 4020
ctcataaggt taccgatcaa tgcatttcat acggatatag acctagggct ctggaggggtg 4080
ggggattgtt aaaacacatg caaaaaaaaa aaaaaaaaaa aaattttgta tatataacca 4140
ttttaatctt ttataaagtt ttgaatgttc atgtatgaat gctgcagctg tgaagcatac 4200
ataaataaat gaagtaagcc ataaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 4260
aaaaaaaaan aanaaaaaaa aaaaaaaaaa aaaaangggg gg 4302

<210> 89

<211> 2782

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (82)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (743)

<223> n equals a,t,g, or c

<400> 89

ggaaaagcag gagaccagtt ggtgccagat aatctaaaag aaacagataa ggaaaagggc 60
aatgtgggtg tgaaaggaga antgagtgcc cggatgaaga ttccaagcaa tatgtgggta 120
gaagcctggg aaacagctaa gccaatcctt gctagaaggc aaaggagact ctttgatgat 180
acacgggaag cagaaaaggt gctgcactat ctggcaatcc agaaacctgc agaccttgct 240
cggcacctgt taccttgtgt gattcatgca gctgtactca aggtaaagga agaagaaagt 300
ctcgaaaaca tttcttcagt taagaagatc ataaagcaga taatatccca ttccagtaaa 360
gttttgcact tcccaatcc agaagacaag aaattggaag aaatcattca ccagattact 420

```

aatgtggaag ctctcattgc cagagctcgg tcactaaaag ccaagtttgg aactgagaaa 480
tgtgaacagg aggaggaaaa ggaagatctt gaaagggttg tgagttgcct gctggagcag 540
cctgaagtgt tagtcaccgg tgcaggaaga ggacatgctg gcaggatcat tcacaagctg 600
tttgtgaatg cccagaggtg ccagctatga ctccaccaga ggaggaattg aagagaatgg 660
gctccccaga ggaaagaagg cagaactccg tgtcagactt cccacccctt gctggccggg 720
aattcatttt gsgcamcact gtncgcgccc tgctccctac tccaaagctc tgcctcagcg 780
gatgtacagt gttctcacca aagaggactt tagacttgca ggtgcctttt catcagatac 840
ttccttcttc tgattcttct agcattactc gttggtggct tcagagacag tgctgcctcc 900
tcctgagggg ggggaaggta cagggagaac ctgggaggtc ctggagaggg ccctgtccag 960
ttgggtgatc aggaatcaaa ccagcatcgg aaagacttcc cagcaccaag cttgagctgt 1020
gtcgtttcgt ggagggggca gcgaggatgg gcttgagctg ttgagagatt tctgccctag 1080
agatggcctt tgtatatggg ggggtgggtg ggggacacaa acacatcaga cactccgtcc 1140
tcacactggc aggacgggtg tcatcgcatt ctcttctgtg accagcctct aggctagcgg 1200
ctgcattcgt ggtctgtgca aacacttcgt gttctatat atcagcagca agtgtgcaaa 1260
ataaaggacc tgtaactca gatttctgga tattttgggt gtagcttcta gtcccagaat 1320
ctgtgttttt aaaatactac atgacattct gtctattcaa tcacctgggt gtcattcttc 1380
ttgtactaat taactgttga tgagcatttt ggatattcta ggagaaagcc tataatttca 1440
catagtctct ctttttcatg taactgtaac ctaaagtat tacttctgat aaaactatat 1500
atcaaagtgc actgcaaatt agttttatat ctgtcatgtg agatttgtct tacttatttt 1560
tcttttggtt gccatggaag ttatggccct gaaaatcgct tccctccctt tctcttgctg 1620
tacagcatgc gttctctttt tgtggttgct ggctgggtac tgtatttaat gaagtagaga 1680
atagcacttg caaaaataca gtcttggtac ctagagactg tcatgcagat agtataattt 1740
ggatatatgt ctaatgcatt gagtagagga ttattttaac acactatttt gcttttgtat 1800
tttagttaaa ataatcgatg gggatgtgta gccccccgt gtgaggatga catcaccaca 1860
tttctagttt catggagctc aagatgtctt gtgtctgtgt ggctagatgg cctctgcttg 1920
gtaatcttat ttttaggcct aaaattccca cttaaatacca aagtaaaaaat ggttatactg 1980
aagcataaac cttgcctgtg taattttaaa aaattaatag agctgtgcaa accctgttat 2040
ttttgtaaaa aaaaaaaaaa atacatatct atatataata tgtgtgtgtg tgtgacatat 2100
gcacacgtct ctgtgtatgt gaagtagggg aggccctggg ggatgacctc ccagccttta 2160
tgatgctttt ctctatgctg ctggacttca ttcttactgg tccacgcaga tgcaggcgcc 2220
tgaggccagt gctgtacca gtagaagacg gttcctaagg acagagtttg tctgttttct 2280
aacaaagaaa aattctacaa aggagaggtt gggcggtaca aaggcattgt gaatctaata 2340
aaaggaaagt gtcgctttct gtggcggttt ctttcatttt ctcccgctgr ggcwtttcag 2400
tctaatttca tgtggktttg tgctgtctca gctctaattg ttgcagcctg ctgagcctaa 2460
caaggcagtg gtctcaagaa cattctttgt gcctttttta agtactccat tttattttta 2520
tgatagttat gtatttattt cacagatata tttaagtacc cactttgtgt caggtacagt 2580
acaagcaatg aagataaaa acagaaaccaa acacactccc ttacagggaa aactgacacc 2640
acgttgccac aaaatgttga gtatagtcaa ctctgctgtg tggatcggag ggcctgcatt 2700
tactctacaa ataattgaat gtaatcctac attcatgtat tcattggcag tacggagtaa 2760
taaatgcagc aatgccataa aa 2782

```

<210> 90

<211> 1037

<212> DNA

<213> Homo sapiens

<400> 90

```

aattcggcac gagctgtctg cgaagtggcc cttgattaca aaaagaagaa acacacctaa 60
acactttatc tccaagttac aaaagtttga ggtgcagagg gaaggccaga tttttttttt 120
aatgaaatta tatagattag atctcagtat ttaaactgtt cctcaatttt gtgaggctgt 180
gttggaataa acccgctct agtgctgttg gtatgcaagg cagcgggtgct taatcaatat 240

```

```

ttcctgtgct caccagaggc aaaatgtacc aatatcctga caccattctc tctccattta 300
cttctggtgg ttaccctgac tcttgactct tagaagtgcc cgagatgggg ctaaccttta 360
ttaaacagat cgcattattat gatcttgctg cagccacagt gcagctccac attaaactcta 420
cagaccaaac catttgatc tggcatcact tactaacaca cgacatgcgg cttttctgca 480
tcaactgcta tgacggttaa gaatgtcagt atacaagaag gaatagaaaa ctgatactgt 540
tttaaataat ctgtaatttc aatTTTTTTT ttttttTgct gaaatacatt atattgtacg 600
tttgagataa ttctagtaca aagtataata aaactagatg tataataaac cttttaaatc 660
attggttaagt gtacaagtgg tggaactgaa gcatttactg gacaaagtaa tgttactcta 720
atggttactt gctcgtgcgt tgccacactg tggtataatt tgcttcattt ccttgctatt 780
tgatacatag tgtgcatttc tctgtcactg taactattgt aatgacaaat tttcatctta 840
ctgcacaatc aaaatgacat tgataggaat gaactccaga ggctgggcct gaacaggagg 900
gtggtcgctc aggcctgggtg ctcagtcgta cgacctgtac ctctcaactt ttgccctatc 960
tgttaaatat atgctatgtc attaaatgct tttaaatcta aaaaaaaaaa aaaaaaaaaa 1020
aacggggggg ggcccg 1037

```

<210> 91

<211> 1052

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (76)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (962)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (965)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1044)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1048)

<223> n equals a,t,g, or c

<400> 91

```

gggcacgagt gcagggtgat gctgcactgc acccagcatc tctgcttatc aggaggctct 60
ggagccacac cgcagnaagc acacgccctt ttgagccaga catgctgact ttctaataag 120
gatgttctct ctccacagct gaaagatgaa aattctaagc tgagaagaaa gctgaatgag 180
gttcaragct tctytraagc wcawacagaa atggtgagga cgcttgagcg gaagttagaa 240
gcaaaaatga atcaaggagg aaagcgacta ccacgacctg gagtcggtgg ttcagcaggt 300

```

```

ggagcagaac ctggagctga tgaccaaacc ggctgtaaa gcagaaaacc acgtcgtgaa 360
actaaaacag gaaatcagtt tgctccaggc gcagggtctcc aacttccagc gagagaatga 420
agccctgcgg tgcggccagg gtgccagcct gaccgtggtg aagcagaacg ccgacgtggc 480
cctgcagaac ctccgggtgg tcatgaacag tgcacaggct tccatcaagc aactggtttc 540
cggagctgag aactgaatc ttgttgccga aatccttaaa tctatagaca gaatttctga 600
agttaaagac gaggaggaag actcttgagg acccctgggt gttctcagca tgaagctccg 660
tgtataccct gaggtcacca ccgctcgatc taaatgtgca gttgtgtcct taaatatgca 720
gtcttcaccc agagtaaagt gttgatcgca agagtccagt gtcgtgccct cagccagttc 780
ttggccacca caatgggagc agccctggcc cgagttgtct ctgtggtttc tatgcagccc 840
ttcttggsa aattcctgcg atcttataga ttctaagag ctcttggaag acattgtcat 900
aaaagccagt gattttaara aaaaaaaaaa aaaaaggggc ggccggtttt aaaagatccc 960
tnganggggc ccaagcttac gcgtgcattc gacgtcataa cttttttccc tataaggag 1020
cgattataag cttaggcact tgnccngg tt 1052

```

<210> 92

<211> 1234

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1115)

<223> n equals a,t,g, or c

<400> 92

```

cttcggcgca tgcgcgctga ggctgcctg accgaccttc agcagggtg tggctaccat 60
gttctctcgc gcgggtgtcg ctgggtgtgc ggctggacc ttgcagccgc aatggattca 120
agttcgaaat atggcaactt tgaaagatat caccaggaga ctaaagtcca tcaaaaacat 180
ccagaaaatt accaagtcta tgaaaatggg agcggcagca aaatatgcc gagctgagag 240
agagctgaaa ccagctcgaa tatatggatt gggatcttta gctctgtatg aaaaagctga 300
tatcaagggg cctgaagaca agaagaaaca cctccttatt ggtgtgtcct cagatcgagg 360
actgtgtggt gctattcatt cctccattgc taaacagatg aaaagcgagg ttgctacact 420
aacagcagct gggaaagaag ttatgcttgt tggattggg gacaaaatca gaggcatact 480
ttataggact cattctgacc agtttctggt ggcattcaaa gaagtgggaa gaaagcccc 540
cacttttga gatgcgtcag tcattgccct tgaattacta aattctggat atgaatttga 600
tgaaggctcc atcatcttta ataaattcag gtctgtcatc tcctataaga cagaagaaaa 660
gcccattctt tcccttaata ccgttgcaag tgctgacagc atgagtatct atgacgatat 720
tgatgctgac gtgctgcaaa attaccaaga atacaatctg gccaacatca tctactactc 780
tctgaaggag tccaccacta gtgagcagag tgccaggatg acagccatgg acaatgccag 840
caagaatgct tctgagatga ttgacaaatt gacattgaca ttcaaccgta cccgccaaagc 900
tgtcatcaca aaagagttga ttgaaattat ctctgggtgt gcagctctgt aaagaaggaa 960
aattcagcca gttgattttg tttttagctt actgctgcct ttgtccgaag aaactgttcc 1020
tccattatth gaattactga agacagcaag atatttgtaa attatcttaa aataaacaac 1080
ttaaaataaa atcattgttt ttcttatata taagnacaat agatatagtt tttgaaatga 1140
gatgatacta aaacatttaa aaatattaat atgctactat taaaatttt tagtagaaga 1200
caaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 1234

```

<210> 93

<211> 1571

<212> DNA

<213> Homo sapiens

<220>
<221> misc feature
<222> (1497)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1516)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1530)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1546)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1571)
<223> n equals a,t,g, or c

<400> 93

```
gagcctgatt ccatcaaaaa gaaaggagta aaaagcaagt tacagcccag cagcacatct 60
gctttccctg ggtccggggg ctgccasgag ggascgggar gtctgtccac ctcacaaggc 120
aggctctgtc agcttttgtc actccctgat ttcttattct ttgttacctt ttttcgcctg 180
actgattttt acttggcatt taagttcccc ttagcactgc cagattctaa aaggttatat 240
tcttttttaa aaagaagaga aagaaagaag gaaagaagac aaagaagaa taaaaacctc 300
cgagtgttaa ctacttttcc ctttcttctt ttttttataa agaatacatt ctttcacatc 360
ttgaatttct gtgaatttta gtttccattc tttctgcctt tgcaaaccag acacctaaat 420
tatacgtsga agctgttaaa aagtgtttt ttttttttta atggaaaata tccaagaagc 480
agcccaggag tatctgacat ggtggaatgg aatcagttag aaagcgaaga aatcactaaa 540
aaaagttact tctttttttc cccaccagtt ataatcttca accttactag tttataacag 600
tttaatgtcc tatagaagga tcctccacta aagttataat ttttaagtata gtcatataga 660
gagatcccta atcccctggg taatctagat actaaagggt gggagaagaa gtcatataga 720
cattctttta tccaaaacca ctgtttgaaa ttagtaagga tattttcagc attcccaaaa 780
acatgttatt agcacgttga gctgaaaacg ttttcttcc tcagttagta cagaaaccaa 840
agcagctctg gtgtatgtct atgtatagac tgtatcgtac ctgggctcat ggagtagtct 900
aaatttaaaa cgtcctctct tctacctcca atgaaaatgt ttccgtgtgt ggcgtctgat 960
cttccaccgt gtgtgtggtc gtctgtggt gtagecgtgt ttaaggagcg ctgtgtgctg 1020
cttagtgtcc acgatgtgtg tggctgctct ctggtgtagt agcactgttt gaggagcact 1080
gtgcgcccgt agtgtgggtt tacacttatg agtgttgtca ttacatgtgt tctgtctctc 1140
tctccctctc ctgcccctgc cctgctccat cagagagagc tgcaggctct tgcgtccgcc 1200
tagtagttcc ctgtcacaaa gggatgccaa ggcttaccga tctgtctgtc aaaaccaaaag 1260
atgtctggga aatccctcga gaatccctgc agttgatcaa gagactggga aatgggcagt 1320
ttggggaagt atggatgggt atgctgagac tcaattactc tcttattagc ttcccgtttt 1380
ggaagatccc aaacacaaaa gatggaaggt gaaaataaag actgcgtgac cgggaagaaa 1440
```

gtttgaatta ctaatagtgg ggaataataa tttcagtttt ggtttttaaac atctggnatt 1500
cctaaaaaaa aaaaaaanaaaa aaaaaaaacn cgggggggggg cccggnaccc aattcccccc 1560
aaaggggggg n 1571

<210> 94
<211> 1872
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (4)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (6)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (51)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1271)
<223> n equals a,t,g, or c

<400> 94
gggnancccc cccggggggg aaaacggatg ggccccgggc cccccaaaaa ntacccccga 60
ggttttttttt tttttttttg atttaataaa gttttatttt tccaaatgta cagctgggtg 120
gacctattca tgcattctca ccagcagctg gagcatctcc acccttggtg tttctgggtg 180
aaattacttg agctctgtgc tttgaaacca gtttgataag tcctttacta aggagctcct 240
gaagggctgc cctggccagg gagcctcgaa tcttcagtct ctacagagacc acwkcttctt 300
tttggccttg cccccggatt tgttcaactg gtctttgtct ttcttgggccg actttccagc 360
gtccttcttc ttcttgctgt ccttaggcgg cattgcgaag ctccggagaat agcagcagac 420
accgcagcct cgtcaagatg tcggacaaaa aggaagcgct gctcagaaac gkgcccaaaa 480
accaccgtcc gctgtgagta cttccggggc aagaggcgga gccaggcaga rgaagtccca 540
cggcgaagcg ctccgctctt agcctgaggc ggaagacagg aagyggattc tagttcccaa 600
gccgcaccgc ctaaataactg ccggagtctg cgctagtgtg gacgcagtac tatagcgtg 660
ttttcctgca ctgataaacg aaaagcaatc caccaggctc cggcagctaa ctttcgggca 720
ctacttatgc ccgagcgtgt cgctcccagt gcgcaagtgc agcaggtggc tgcacggggg 780
gcgcgggagg aggaggagga ggaggaggag gctgggggtg ggccggcggc aagtgtgtg 840
atgcggttcc ggggaggggc cgtcgggtag aggtcgaata ccagtttccg agcggcaagg 900
cagcgatggc gatttttagt gtgtatgtgg tgaacaaaagc tggcggcttg atttaccagt 960
tggacagcta cgcgccacgg gctgaggctg agaaaacttt cagttatccg ctggatctgc 1020
tgctcaagct acacgatgag cgtgtgttgg ttgctttcgg ccagcgggac ggcattccgag 1080
tgggtcaatg agtgctggcc atcaatggca tggacgtgaa tggcaggtac acggccgacg 1140
ggaaagaggt gctggagtat ctgggtaacc ctgctaatta cccggtgtcc attcgatttg 1200
gccggccccg cctcacttct aatgagaagc ttatgtctggc ctccatgttc cactcgctct 1260

```

ttgccatcgg ntcccagctg tctcctgaac agggaagctc aggcattgag atgctggaga 1320
cagacacatt caaattgcac tgctaccaga cactgacagg gatcaagttt gtggttctag 1380
cagatcctag gcaagctgga atagattctc ttctccgaaa gatttatgag atttactcag 1440
actttgccct caagaatcca ttctattcct tagaaatgcc tatcagggtg gagctctttg 1500
accagaacct gaagctagct ctggagggtg cagagaaggc tggaactttt ggacctgggt 1560
cataggctga acctgttatg gacccccaaa ttctgagagt tcctgcaaca agaatactgc 1620
tgttgacact ccagtggaaa tcccagcagc cttgttagtg cacttgaaag tgggagaatg 1680
ctgacctga tgacttgtag tgattcctga gccttaacac tgtgctcttt cttctgtat 1740
ataccatggt cttactttcc aactctgtac agatttatatt atggaggagc taggtccata 1800
aatgttgtaa taaatattcc tttgatcttg gtgtttgcaa aaaaaaaaaa aaaaaaaact 1860
cgagactagc gg                                     1872

```

<210> 95

<211> 1516

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1505)

<223> n equals a,t,g, or c

<400> 95

```

ggagggcaga aagggagagt gctgggcggg cttagtcgga gattgaggac tgggaatccg 60
cttccgggag ggcactgtct agtgacagg caacctggcc ttsgcctcct agcccgagaa 120
gccgaatctc cctaataccct gtgacctgtg tcacctctgc atcgcgagga gggggataag 180
tggggagaag tctggtgtca gatgggatgg cgccggaaga gggtgccaca gcggggacgg 240
aaggcgcccc caccccaact ccacgggaat ataaacaatt tgtattttcc gatcagggtg 300
cgggacaggc ttcatgtgga cagccctaac ccagctgctg aatgccagag gccacgaagt 360
acgttggtct cccgaaagcc cgggcccggc cggatcacgt gggatgagct cgctgcatcg 420
gggctgccga gctgcgatgc cgccgtcaac ctggccggag agaacatcct caacctctc 480
cgaagatgga atgaaacctt ccaaaaagag gttctcgga gccgcctaga gaccacccaa 540
ttgctggcta aagccatcac caaagcccca caacccccca aggcctgggt cttagtcaca 600
ggtgtagctt actaccagcc cagtctgact gcggagtatg atgaagacag cccaggaggg 660
gactttgact ttttctccaa cctcgtaacc aaatgggaag ctgcagccag gcttccctgga 720
gattctacac gccagggtgg ggtgcgctca ggggttgtgc tgggccgtgg ggggtggtgcc 780
atgggccaca tgctgctgcc ctttcgcctg ggcctggggg gccccatcgg ctcaggccac 840
caattcttcc cctggataca catcggggac ctggcaggaa tcctgaccca tgcccttgaa 900
gcaaaccacg tgcacggggg cctgaatgga gtggctccat cctccgccac taatgctgag 960
tttgcccaga ccttcggtgc tgccctgggc cgccgagcct tcatccctct cccagcgct 1020
gtggtgcaag ctgtcttttg ggcacagcgt gccatcatgc tgctggaggg ccagaagggtg 1080
atcccacggc gaacactggc cactggctac cagtattcct tcccagagct aggggctgcc 1140
ttaaaggaaa ttgtagccta agtaggtcat ggcaagggcc tgaggcctgt tcctcacagg 1200
cttccagggt aggcactgtg aataggctca gtcctctag agagctgaag ccactctggtt 1260
cttagattcc tctcccagtc ctctttccca ttgttctgtt gctccacctt attgtctcaa 1320
ggccgtaatc tcatcagggt gggacattaa tcttttcaac tccttgtaag atttcccggg 1380
ttggtttctc tacatgtcct gcagctgccc cacttctcct ttacgctgtg tagagaatgc 1440
tctgcagttt aggcaataaa aataaattgt ctcactaaaa aaaaaaaaaa aaattggggg 1500
gggnccccgt acccat                                     1516

```

<210> 96

<211> 1770
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (485)
<223> n equals a,t,g, or c

<400> 96
agtgccagga gtgggttcca gatcgggaga gctacgtgtc ccacatgaaa aagagccacg 60
gtcggacatt gaagcgggtac ccatgccggc agwgtgaaca gtccttccac accccaaca 120
gcctgcgcaa acacatccgc aacaacatg acacagttaa gaagttctac acctgcgggt 180
actgcacaga ggacagcccc agctttcctc ggccctccct tctggagagc cacatcagcc 240
ttatgcatgg catcagaaac cctgatttga gccagacgtc caaagtgaac cctccgggtg 300
gacattcccc tcaggtgaac catctgaaaa gaccagtcag tggagtgggg gacgctccag 360
gcaccagcaa tggcgcaact gtctcttcca ccaaaaggca caagtccctt tttcagtgcg 420
cgaaatgtag ttttgccaca gactcggggc tcgagtttca gagccacata cctcagcacc 480
aggtnggaca gytccacagc ccaatgtctc ctctgtggtt tgtgctacac ctctgccagc 540
tccctcagcc gccacctctt cattgtccac aaggtgagag accaggagga ggaggaggaa 600
gaggaggcgg cggcacggag atggcagtgg aggtggcaga gcagaggagg gctccgggga 660
rgargtgccc atggagacta gagagaatgg actggaagaa tgtgccggtg agccyttgtc 720
agctgaccca gaggcgagga gattgctggg cccggccctt gaggaacgat gtggccacaa 780
tgatcacakt caaccacagg cytytcagga ccaggacagc cacacactgt cccctcaggt 840
gtgaccggag actttgcagt gtgcatggtc aggggtgggt ccgaagtgtc ttccacctgc 900
cctgcggacc gtggaaaata aaaggctctg cccccagtgt gagtgtgacc ggttgtacct 960
tggagtagtg tctgccctga gctgccagt ctgggtatcc cccagcccca ggaaatgtgg 1020
ggtcggccag gaccctcaca gctctgaatt tgcttctgtt atttatggct tttcgytgct 1080
tcttggtgcc ccatctcttg tctgtgtcct tccaacccca agctgcttat gtggcccaac 1140
cccactgctg tcaactaggc ttgaacccca cagcggctgt gctcttctgg gaggttccc 1200
cttgctgcct tcagccagg cgctcctcag agctctatct tccctgcagac accagctctc 1260
cttctgcct ttagatcctg agaaggagg aaatgagggg tgctgacaca gtccctctgg 1320
gagagctctg cctagtctgg tttggcgagg gcccttgatc accttgcccc tcctccctgt 1380
cttctctgat tcttttccct caaaatagtc ctgagaacta attgtcacac tggctcatca 1440
tgtctctgtg ggtgggggtg gagaaacctc tgctgcacac ctctgtttgg aacctgggca 1500
gagcaggagg taaggcaaag gcaggcaggc accaagaacc agacccttg agaaggcgct 1560
gtgggtgggt ctttgttctg ctgttctgcc ttctctgaca ggtgggggtg gggcacacag 1620
acattggaat atttgtactg ctctcgtgcc atttgagagg cttgctgccc caggcaggcc 1680
agcccctact cctcttggt acactcatgt tkctcagact atatttcaaa taaaaaatct 1740
tctcaccatg caggtaggct cttgtattcc 1770

<210> 97
<211> 938
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (183)
<223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (293)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (360)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (938)
 <223> n equals a,t,g, or c

<400> 97
 gcagaagagg ggagattggg ggagagatga cagctgcagg gatggttgtr agccgctagt 60
 ratggagagc agagggagag ggccaggctc caractccca cagccccaca cagcacctct 120
 gccaggccta ggagaagaca ggtgcagctc ttgcagctct gcgggtgtgc ggccaaaggc 180
 aangcccacg ggctggatgt cacttccccg actgtctctt ggttggcttg tccttgtgca 240
 agaccacgcs tgtcacgaca garcctgggc acttcagagg aggagccagg ttngaattggt 300
 aaggggggaa ttgggggtcca ccatagtctt ctgctctggt cctccacggg tgggaccagn 360
 atggaagtct cctgcctaac ctcaactgcat tgcactggac ctgggatgcc tatccaccct 420
 ctggcagaag acactcacca gggttatctgt gaagagactc tgggatccca tcacctcaaa 480
 gccagagggt cccaagtca ccgctgagag cacttgagcc tcaaggatgt aagcctgacc 540
 ataggatctt gactccaaca ggggcaaccc ccacccccat tgtggtccgt ccttaaccca 600
 tccactcttc ttcgaggagca actgagaaca cataaagcaa gcagctacct agcatcccc 660
 tcctaaagct ttagactcag agcccagggt cccccacaag cctcaaggta gcctcagggt 720
 tctctaattt cctccactcc cagttcgaag caaacagctt actgcctagt ccccgccaat 780
 cccaagggcg ggctggctga tggcagcatg gtgggctggc ctgggtgtgg agtgaaagag 840
 tcactgtggt gggggcgaga ggaggacttg ggagctggag gtgtgacacc ttcagttctg 900
 ttcctattaa aggaccttct gaagggcaaa aaaaaaan 938

<210> 98
 <211> 311
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc feature
 <222> (297)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (309)
 <223> n equals a,t,g, or c

<400> 98
 agatggggct ggagcagcag aagcagacgg tccagatgcg cgcgagatg cccgccttcc 60
 ccctgcccta cgcccaggca tgtgccatcc tcccgcacc cagaggtttg tgggctgagg 120

accaaactctc accgctgtct ctttcgtccc cagctccagg ccatgcccgc agccggagggt 180
gtgctctacc agccctcggg accagccagy ttccccagca ctttcagccc ygccgggctcg 240
gtggaggggct ccccaatgca cggcgtgtac atgagccagc cggtccttgc cgctgggnccc 300
taccaccagna t 311

<210> 99
<211> 620
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (368)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (570)
<223> n equals a,t,g, or c

<400> 99
actgccggtc gttcggacgt cttgcctgtc gctggaggag aggtccgggc tctccaggaa 60
ggtggctgcg gcgacaaaat gaagatattc gtgggcaacg tcgacggggc ggatacgact 120
ccggaggagc tggcagccct ctttgcgccc tacggcacgg tcatgagctg cgccgtcatg 180
aaacagttcg ctttcgtgca catgcgcgag aacgcggggc cgctgcgcgc catcgaagcc 240
ctgcacggcc acgagctgcg gccggggcgc gcgctcgtgg tggagatgtc gcgccaagg 300
cctcttaata cttggaagat tttcgtgggc aatgtgtcgg ctgcatgcac gagccaggaa 360
ctgcgcancct cttcagagcg cgcgacgcgc tcatcgagtg tgacgtggtg aaagactacg 420
cgtttgttca matggagaag gaagcagatg ccaaagccgc aatcgcgag ttcaacggca 480
aagaagtgaa gggcaagcgc atcaacgtgg aatctycacc aagggtcaga agaaggggcc 540
tggcctggct gtccagtctt gggacaagan caagaaacca agggctgggg ataggccttc 600
cctggaatgg tggctttctg 620

<210> 100
<211> 2511
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (12)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (28)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (44)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2456)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2488)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2511)

<223> n equals a,t,g, or c

<400> 100

```
gtaccattcc cngaccgctt ggcctgtncg attaatccgc cccnatagga attggcccgg 60
gccagattcg gccgagcaag cggaacctct gggaaaagca atctgtggat aaggctcactt 120
ccccactaa ggtttgagac agttccagaa agaaccacaag ctcaagacgc aggacgagct 180
cagttgtaga gggctaattc gctctgtttt gtatttatgt tgatttacta aattgggttc 240
attatctttt atttttcaat atcccagtaa acccatgtat attatcacta tatttaataa 300
tcacagtcta gagatgttca tggtaaaaagt actgcctttg cacaggagcc tgtttctaaa 360
gaaacccatg ctgtgaaata gagacttttc tactgatcat cataactctg tatctgagca 420
gtgataccaa ccacatctga agtcaacaga agatccaagt ttaaaattgc ctgcggaatg 480
tgtgcagtat ctagaaaaat gaaccgtagt ttttgttttt ttaaatacag aagtcatgtt 540
gtttctgcac tttataataa agcatggaag aaattatctt agtaggcaat tgtaacactt 600
tttgaaagta acccatttca gatttgaaat actgcaataa tgggtgtctt taaaaaaaaa 660
aaagaaatgt actgttaagg tattactttt tttcatgctg atgattcata tctaaattac 720
attattatgt tagctgacag tggtagctgat tttttagggtt ggttggtttg tggatttctt 780
tagtagtgat agtagcctga accacatttt agataactca attatgtatg tatgtgcata 840
cacatatata aacacactaa tggtagaatg cttttttatg tgctagacta ttatathtag 900
tagtatgtca ttgtaactag ccaatatcac agcttttgaa aaattaaaaa atcacactat 960
attaatattt catatttgcc aacagaaaca tggcagatag gtatcaatat gttttcaatg 1020
cctgatgacc tataagaaga aagtattgaa aagaagagag attagaactg ttagaaggag 1080
ttgaaatttt ctaaaagaca tagtatttag tttataatta aatgcattct tgaagtccag 1140
tgtgaatttt attaatgcta tcatctcgac caagctcaaa gcctacttat tagaaacaat 1200
gaagttcaca ataggtcata aggtctcttc cttttctaaa attgaaagac aagaaattta 1260
gtgccaatat tgtacagaca gaaattccat gtatgagtct caacaaagac tacctttggc 1320
taaatgtcta gaagcagaga agtaaagtga gcaaaatcca gtgttgagga gtcatgacag 1380
tactttgatc tttatatact ctgaagcatt tcttcaaact tttctacttt tatttgatc 1440
tgataacctgt agtaagttga caatgtggtg aaatttcaaa attatatgta acttctacta 1500
gttttacttt ctcccccaag tcttttttaa ctcatgattt ttacacacac aatccagaac 1560
ttattatata gcctctaagt ctttattctt cacagtagat aatgaaagag tcctccagtg 1620
tcttggtgaaa atgttctagt atagctggat acatacagtg gagttctata aactcatacc 1680
tcagtggact taacccaaat tgtgttagtc tcaattccta ccacactgag ggagcctccc 1740
aaataaactt tttcttattc gcagtattcc tccagaagag ctaaccaggg cagggtggtc 1800
atgagaagtg acatctgcgt tacaaaagtc atcttcctca taagtctgta aagagcaatt 1860
gaatcttcta gctttagcaa acctaagcca aaggaaggaa agccacgaag aatgcagaag 1920
tcaaaccctc atgacaaaagt aggcacaagt ctacaataag ctaaatcaga atttacaatt 1980
```

```

acaagtgtcc caggtagcat tgactcccggt cattggagtg aaatggatca aagtttgaat 2040
taaggcctat ggtaaggtaa cattgccttg ttgtactttt gaacaagagc tcctcctgat 2100
cactattaca tatttttcta gaaaatctaa agttcagaag agaatgtatc actgctgact 2160
tttattccaa tatttgatg gagtaagttt tagggtagaa ttttgttcag tttggattta 2220
atcttttgaa aagtaaattc cttgtttact ggtttgacta taattctctg ttatctttac 2280
gaggtaaaac tgcaagctga ctagcatgtt ctgtgaatct gccattccta aaaattttat 2340
aaacacttga tacttttcac tgataatgga tcgctccaat aaacatatat tgtgaaaatg 2400
catccacaat aaatggaatt ctttcctgca aaaaaaaaaa aaaaaagggc ggccgntcta 2460
gaggatccag gcttacgtac gcgtgccngc gacgtccata gccccttcta n 2511

```

<210> 101

<211> 2981

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (293)

<223> n equals a,t,g, or c

<400> 101

```

cggacgcgtg ggcggccacg ttgtcttgcg cgctttgccc gcctggccct gggactctga 60
ccctcggcta ccctttcctg cccactagc gtggccgcga gcctcgggta gccggccgta 120
ttcccgtctt cgcttagggg gcacaggcgc aggcacgcgc cgggccactc caagccttcg 180
gtgcgcgggc gcgtctggga tacgggcccg ggagggccgc ccctcgcgcc gcccggtgcc 240
tctcaggaac agcgaaccgg agagagcgcc ggagagttgg gctcagtger ganctcggcg 300
ccggggccca tgcccgtgcg ccccccgcag ccggcgccat ggccctcggg agtktgcccg 360
agtgcctgca gcaggagacc acctgccccg tgtgcctgca gtacttcgca gagcccatga 420
tgctcgaact cggccataac atctgttgcg cgtgcctcgc ccgctgctgg ggcacggcag 480
agactaacgt gtcgtgcccg cagtgcgggg agacctccc gcagaggcac atgcggccca 540
accggcacct ggccaacgtg acccaactgg taaagcagct gcgcaccgag cggccgtcgg 600
ggcccggcgg cgagatgggc gtgtgcgaga agcaccgcga gccctgaag ctgtactgcg 660
aggaggacca gatgcccac tgcggtggtg gcgaccgctc ccgcgagcac cgcggccaca 720
gcgtgctgcc gtcgaggag gcggtggagg gcttcaagga gcaaatccag aaccagctcg 780
accatttaaa aagagtgaag gatttaagaa agagacgtcg ggcccagggg gaacaggcac 840
gagctgaact cttgagccta acccagatgg agagggagaa gattgtttgg ggtttgagc 900
agctgtatca ctccctaaag gagcatgagt atcgccctct ggcccgcctt gaggagctag 960
acttgcccat ctacaatagc atcaatggtg ccatcaccca gttctcttgc aacatctccc 1020
acctcagcag cctgatcgct cagctagaag agaagcagca gcagcccacc agggagctcc 1080
tgaggagcat tggggacaca ttgagcaggg ctgaaagaat caggattcct gaaccttgga 1140
tcacacctcc agatttgcaa gagaaaatcc acatttttgc ccaaaaatgt ctattcttga 1200
cggagagtct aaagcagttc acagaaaaaa tgcagtcaga tatggagaaa atccaagaat 1260
taagagaggc tcagttatac tcagtggacg tgactctgga ccagacacg gcctacccca 1320
gcctgatcct ctctgataat ctgcggcaag tgcggtacag ttacctcaa caggacctgc 1380
ctgacaaccc cgagaggttc aatctgtttc cctgtgtctt gggctctcca tgcttcatcg 1440
ccgggagaca ttattgggag gttagaggtg gagataaagc caagtggacc ataggtgtct 1500
gtgaagactc agtgtgcaga aaaggtggag taacctcagc cccccagaat ggattctggg 1560
cagtgtcttt gtggtatggg aaagaatatt gggctcttac ctccccaatg actgccctac 1620
ccctgcggac cccgctccag cgggtgggga ttttcttggg ctatgatgct ggtgaggtct 1680
ccttctacaa cgtgacagag aggtgtcaca ccttcacttt ctctcatgct accttttgtg 1740
ggcctgtccg gccctacttc agtctgagtt actcgggagg gaaaagtgcg gctcctctga 1800

```

```

tcatctgccc catgagtggg atagatgggt tttctggcca tgttgggaat catggtcatt 1860
ccatggagac ctccccttga ggaggtgaat tcaggccaaa agggctgttg gctgtaatcc 1920
tacgccaggc acaaggcatc ttgttgccct gccacgtcct gtcacagctg ggtatcctta 1980
ccatgttcca cggccttgca gtgggagaca ggatgtccat gttctctacc atccttttcc 2040
ttcccatgca gattgtgaaa tgtaatgaga tgtatcaaga tatcctagaa ataaaaacca 2100
gatgtccacc tccagtgttt catactttct ggttttacac atcgctggag ggataaagag 2160
tatggataat ctttggattt ggagagccgt tcaagatact tccagcttct tggctcagcc 2220
tggcttcctc tggttcagcc ccacataatg attatggcta tttgctgtca tttctgggt 2280
agggctcctt tctaacaacc tagactggaa taaggccctg tcagcatggc tccctttatc 2340
ccagttttcc gtctgggaac agtacctctg cccctgatcc ccaatgtgcc atagttttat 2400
taactccatt aaagaagcct gtatgtgttt tggtagtta cagttatatt acaataatgg 2460
tgggtaatgg cccacctctt gttatgagat aatgttctaa tcaatgtctc tgcctttgta 2520
tcttttctga gggctttgtc tgttctcttc attctaataa aagggtgtatt ctagtgtgg 2580
gtgcatatca tccaggataa tattctgccc aactccatcc tctgttacta gatcccttac 2640
cagtcacatt tgtggactgg tggccagtcg tataccatcc ctggaaggat tctgggacaa 2700
tattccaggg attcattgac ttcttggctc cttttctcca tttcctttgg gggaaggggg 2760
aattgaccat gcttaagtgc atcctatcaa ggggcagctc cgtcccatg gccattggat 2820
catgagacac tctgaagtca gaaggctggg gcagatcact tcaagcaagc cccatgatg 2880
gttctcagtc ctgcttctct gtgggtacgt gcccctctgt ttaaaaataa actgaatatg 2940
gatgtttaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa g 2981

```

<210> 102

<211> 2804

<212> DNA

<213> Homo sapiens

<400> 102

```

ccaaggacac aggtgaaagg ttgagccatg cagtaggctg tgcttttgca gcctgggtta 60
gagcgcaaca ggaagcggcg agaaggaatg tggagtgact gctacttttg atgctagtcg 120
gaccactttt acaagagaag gatcattccg tgtcacaaca gccactgaac aagcagaaag 180
agaggagatc atgaaacaaa tgcaagatgc caagaaagct gaaacagata agatagtcgt 240
tggttcatca gttgcccttg gcaamactgc cccatcccca tcctctccca cctctcctac 300
ttctgatgcc acgacctctc tggagatgaa caatcctcat gccatccac gccggcatgc 360
tccaattgaa cagcttgctc gccaaaggctc tttccgaggt tttcctgctc ttagccagaa 420
gatgtcaccc tttaaaccgc aactatccct acgcatcaat gagttgcctt ccactatgca 480
gaggaagact gatttcccca ttaaaaatgc agtgccagaa gtagaagggg aggcagagag 540
catcagctcc ctgtgctsac agatcaccaa tgccttcage acacctgagg accccttctc 600
atctgctccg atgaccaaac cagtgcacag ggtggcacca caatctccta cttccaagg 660
gaccgagtgg ggtcaatctt ctggtgctgc ctctccaggt ctcttcagg ccggtcatag 720
acgtactccc tctgaggccg accgatggtt agaagaggtg tctaagagcg tccgggctca 780
gcagccccag gcctcagctg ctctctgca gccagttctc cagcctcctc caccactgc 840
catctcccag ccagcatcac ctttccaagg gaatgcattc ctcacctctc agcctgtgcc 900
agtgggtgtg gtcccagccc tgcaaccagc ctttgtccct gccagtcct atcctgtggc 960
caatggaatg ccctatccag cccctaattg gcctgtgggt ggcactacty cctcccagat 1020
ggtggccaac gtatttggca ctgcaggcca ccctcaggct gccatcccc atcagtcacc 1080
cagcctggtc aggcagcaga cattccctca ctacgaggca agcagtgtca ccaccagtcc 1140
cttctttaag cctcctgctc agcacctcaa cggttctgca gctttcaatg gtgtagatga 1200
tggcaggttg gcctcagcag acaggcatac agaggttcct acaggcacct gccaggtga 1260
tccttttgaa gccagtgagg ctgcattaga aaataagtcc aagcagcgt ttaagcaat 1320
ccctaccaac ctttctcca gtgacttaca gaagacgttt gaaattgaac ttaagcaat 1380
cattatggct atgtatcttg tccataccag acaggagca ggggtagcg gtcaaaggag 1440

```

```

caaaacagac tttgtctcct gattagtact cttttcacta atcccaaagg tcccaaggaa 1500
caagtccagg cccagagtac tgtgaggggt gattttgaaa gacatgggaa aaagcattcc 1560
tagagaaaag ctgccttgca attaggctaa agaagtcaag gaaatgttgc tttctgtact 1620
ccctcttccc ttacccctt acaaatctct ggcaacagag aggcaaagta tctgaacaag 1680
aatctatatt ccaagcacat ttactgaaat gtaaaacaca acaggaagca aagcaatctc 1740
cctttgtttt tcaggccatt cacctgcctc ctgtcagtag tggcctgtat tagagatcaa 1800
gaagagtggg ttgtgctcag gctggggaac agagaggcac gctatgctgc cagaattccc 1860
aggagggcat atcagcaact gccagcaga gctatatattt gggggagaag ttgagcttcc 1920
atthttgagta acagaataaa tattatata atcaaaagcc aaaatcttta tttttatgca 1980
tttagaatat tttaaatagt tctcagatat taagaagttg tatgagttgt aagtaatctt 2040
gccaaaggta aaggggctag ttgtaagaaa ttgtacataa gattgattta tcattgatgc 2100
ctactgaaat aaaaagagga aaggctggaa gctgcagaca ggatccctag cttgttttct 2160
gtcagtcatt cattgtaagt agcacattgc aacaacaatc atgcttatga ccaatacagt 2220
cactaggttg tagttttttt taaataaagg aaaagcagta ttgtcctggg tttaaaccta 2280
tgatggaatt ctaatgtcat tattttaatg gaatcaatcg aaatatgctc tatagagaat 2340
atatctttta tatattgctg cagtttcctt atgttaatcc tttaacacta aggtaacatg 2400
acataatcat accatagaag ggaacacagg ttaccatatt ggtttgtaat atgggtcttg 2460
gtgggttttg ttttatcctt taaattttgt tcccatgagt tttgtgggga tggggattct 2520
ggttttatta gctttgtgtg tgtcctcttc ccccaaacc ccttttggtg agaacatccc 2580
cttgacagtt gcagcctctt gacctcggt aacaataaga gagctcatct catttttact 2640
tttgaacgtt ggccttacia tcaaagttaa gttatatata tttgtactga tgaaaattta 2700
taatctgctt taacaaaaat aaatgttcat ggtagaagct tttkcccatg aagggctggt 2760
ctttccctt tcctttatta gtaaatgaat ttatttttaa aaaa 2804

```

<210> 103

<211> 722

<212> DNA

<213> Homo sapiens

<400> 103

```

cgggaagagg cggacagcga ggccaagatt tcagctgcgg gacggtcagg ggagacctcc 60
aggcgaggg aaggacggcc aggggtgacac ggaagcatgc gacggctgct gatccctctg 120
gccctgtggc tgggygcggg gggcggtggc gtcgccgagc tcacggaagc ccagcgccgg 180
ggcctgcagg tggccctgga ggaatttcac aagcaccgc ccgtgcagtg ggccttccag 240
gagaccagtg tggagagcgc cgtggacacg cccttcccag ctggaatatt tgtgaggctg 300
gaatttaagc tgcagcagac aagctgccgg aagagggact ggaagaaacc cgagtgcaaa 360
gtcaggccca atgggaggaa acggaatgc ctggcctgca tcaaactggg ctctgaggac 420
aaagttctgg gccggttggt ccamtgcccc atagagaccc aagttytgcg ggagaccag 480
tgcctcaggg tgcagcgggc tggtaggac cccacagct tctacttccc tggacagttc 540
gccttctcca aggccctgcc ccgcagctaa gccagcactg agmtgcgtgg tgcctccagg 600
accgctgcgg gtggaacca gtggaagacc ccagcccca gggagaggaa cccgttctat 660
ccccagccat gataataaag ctgctctccc agctgcctct caaaaaaaaaa aaaaaaaaaa 720
aa 722

```

<210> 104

<211> 1636

<212> DNA

<213> Homo sapiens

<400> 104

```

tacggctgcg agaagacgac agaagggggg ctatctgaag aggacgggga cgggagcctg 60

```

```

ctctacagcg tgggtcaacac ggccgagcga cgctgatgag gaggagaccc acccggtgac 120
ttgagctcgc tctccagtaa gctactccca ggcttcacca cgctgggctt caaagacgag 180
agaagaaaca aagtcacctt tctctccagt gccactactg cgctttcgat gcagaataat 240
tcagtatttg gcgacttgaa gtcggacgag atggagctgc tctactcagc ctacggagat 300
gagacaggcg tgcagtgtgc gctgagcctg caggagtgtg tgaaggatgc tgggagctac 360
agcaagaaag tgggtggacga cctcctggac cagatcacag gcggagacca ctctaggacg 420
ctcttccagc tgaagcagag aagaaatgtt cccatgaagc ctccagatga agccaagggt 480
ggggacaccc taggagacag cagcagctct gttctggagt tcatgtcgat gaagtcctat 540
cccgcggtt ctgtggatat ctccatgtct agctctctgg ggaagggtgaa gaaggagctg 600
gacctgacg acagccattt gaacttggat gagacgacga agctcctgca ggacctgcac 660
gaagcacagg cggacgcggc ggctctcggc ckctcgccaa cctcagctcc ctgtccaacg 720
cctccgagag ggaccagcac cacctgggaa gcccttctcg cctgagtgtc ggggagcagc 780
cagacgtcac ccacgacccc tatgagtttc ttcagtctcc agagcctgcg gcctctgcca 840
agacctaaact ctagaccacc ttcagctctt ttattttatt tttttagttt tattttgcac 900
gtgtagagtt tttgtcatca gacaaggact ttgatcctgt cccctttggc atgcgggaag 960
cagccgcggc ggaggtaatg aattgtctgt ggtatcatgt cagcagagtc tccaagcccc 1020
acgaaccttg aggagtggag tcatacgcga aggccatatg gcacgtgtc agcagagaga 1080
gtctctgtac acagccccgt gaacctgag gagtggagtc atacacgaag ggcgtgtggc 1140
catcgtgtca ccagagagag tctctgtaca cagccccgtg aacctgagg agtggagtca 1200
tacgcgaagg gtgtgtggcc aggctgcaga gctgcgtgcc gtttgtgtcc gagcatcacg 1260
tgtggtccca gcccttgttt ctgccagtgt agacacctct gtctgcccc ctgtcctggg 1320
gtcgtctttg ggaggcacag gcatgggtgt gtctggcctc attctgtatc agtccagtgt 1380
gttcctgtca tagtttgtgt ctcccaggca ggccatggta ggggcctcgc aggggccatt 1440
ggggagcaca gggccaggct ggggtgagga gagctccctt gttttctgtt taattgatga 1500
gcctgggaaa ggagtgtgtt ctgcctgccc gttacagtgg agcgttccgt gtccataaaa 1560
cgttttctaa ctggraaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1620
aaaaaggggg gggggg 1636

```

<210> 105

<211> 1561

<212> DNA

<213> Homo sapiens

<400> 105

```

caggcgggaa catggccacc gagacccaaa tgtggtgccca ggtcctccca agccagcaaa 60
ggagaaacct cccaaaaaga agggccagga caaaattctt agtaatgagt atgaggagaa 120
gtatgacctc agccggccta ctgcctctca gctggaggac gagctgcagg tggggaatgt 180
tccccttaaa aaagcaaagg agtctaaaaa gcatgaaaag cttgagaaac cagagaagga 240
gaagaaaaaa aagatgaaga atgagaacgc agacaagtta cttagagtg aaaagcaaat 300
gaagaagtct gagaaaaaga gcaagcaaga gaaagagaag agcaagaaga aaaaaggagg 360
taaaacagaa caggatggct atcagaaacc caccaacaaa cacttcacgc agagtcccaa 420
gaagtcagtg gccgacctgc tggggctcct tgaaggcaaa cgaagactcc ttctgatcac 480
tgetcccaag gctgagaaca atatgtatgt gcacaacgtg atgaatatct ggaaagtttc 540
tgcaagatgg ctaccaggaa aatctctgtg atcaccatct tcggccctgt caacaacagc 600
accatgaaaa tcgaccactt tcagctagat aatgagaagc ccatgcgagt ggtggatgat 660
gaagacttgg tagaccagcg tctcatcagc gagctgagga aagagtacgg aatgacctac 720
aatgacttct tcatggtgct aacagatgtg gatctgagag tcaagcaata ctatgaggta 780
ccaataacaa tgaagtctgt gtttgatctg atcgatactt tccagtcccg aatcaaatag 840
atggagaagc agaagaagg gggcattgtt tgcaaaagg acaaaaagca gtccctggag 900
aacttcctat ccaggttccg gtggaggagg aggttgctgg tgatctctgc tcctaacgat 960
gaagactggg cctattcaca gcagctctct gccctcagtg gtcaggcggtg caattttggt 1020

```

```

ctgcgccaca taaccattct gaagctttta ggcgttggag aggaagttgg gggagtgtta 1080
gaactgttcc caattaatgg gagctctgtt gttgagcgag aagacgtacc agcccatttg 1140
gtgaaagaca ttcgtaacta ttttcaagt agcccgaggt acttctccat gcttctagtc 1200
ggaaaagacg gaaatgtcaa atcctgggat ccttccccc aa tgggtccat ggtgattgtg 1260
tacgatttaa ttgattcgat gcaacttcgg agacaggaaa tggcgattca gcagtcactg 1320
gggatgcgct gcccagaaga tgagtatgca ggctatggtt accatagtta ccmccaagga 1380
taccaggatg gttaccagga tgactaccgt catcatgaga gttatcacca kggataccct 1440
tactgagcag aaatatgtaa ccttagactc agccagtttc ctctgcagct gctaaaaacta 1500
catgtggcca gctccattct tccacactgc gtactacatt cctgcctttt tcccttcattg 1560
t
t
1561

```

<210> 106

<211> 486

<212> DNA

<213> Homo sapiens

<400> 106

```

tcgacccacg cgtccgcccc cgcgctccgga aagcagtgtc aagacagtaa ggattcaaac 60
catttgccaa aaatgagtct aagtgcattt actctcttcc tggcattgat tgggtgtacc 120
agtggccagt actatgatta tgattttccc ctatcaattt atgggcaatc atcaccaaac 180
tgtgcaccag aatgtaactg ccctgaaagc taccacaagt ccatgtactg tgatgagctg 240
aaattgaaaa gtgtaccaat ggtgcctcct ggaatcaagt atctttacct taggaataac 300
cagattgacc atattgatga aaaggccttt gagaatgtaa ctgatctgca gtggctcatt 360
ctagatcaca accttctaga aaactccaag ataaaaggga gagttttctc taaattgaaa 420
caactgaaga agctgcatat aaaccacaac aacctgacag agtctgtggg cccacttccc 480
aaatct
486

```

<210> 107

<211> 800

<212> DNA

<213> Homo sapiens

<400> 107

```

cttgatatctg atcgtttctaa aaaagagttg tccccggttt taaccagtga agttcatagt 60
gttcgtgcag gacggcatct tgctacccaa ttgaatatatt tagtacagca acattttgac 120
ttggcttcaa ctactattac aaatattcca atgaagggtga ttcgcatcta ggtggcggca 180
gtcgagaagg ctcgttttaa gaaacaataa cattaaagtg gtgtacacca aggacaaata 240
acattgaatt acactattgt actggagctt atcggatttc acctgtagat gtaaatagta 300
gaccttcctc ctgccttact aattttcttc taaatggctg ttctgtttta ttggaacaac 360
cacgaaagtc aggttctaaa gtcattagtc atatgcttag tagccatgga ggagagattt 420
ttttgcacgt ccttagcagt tctcgatcca ttctagaagr tccaccttca attagtgaag 480
gatgtggagg aagrgttaca gactaccgga ttacagattt tgggtgaattt atgagggaaa 540
acagattaac tccttttcta gaccccagat ataaaatcga tggaagtctt gaggtccctt 600
tggaacgagc aaaagatcag ttagaaaaac ataccggtta ctggcctatg gatcatttca 660
caaaccacca tttttaacak gcaagcggta gttccattag ccagtgttat tgtggaaaga 720
tcyctggaca gaggaagatg tggttwaaac ggtccaaaaa acatwtcca acttgggttg 780
ataaggggaa ggaaaaaagg
800

```

<210> 108

<211> 1058

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (895)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1019)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1054)

<223> n equals a,t,g, or c

<400> 108

```

ggcagcagcg tgactggcgc cgaaatggga gaaagcagcg agtgagaggg gaaggggagc 60
caggcgagca cccgggagcc agcgggacct gggcaggggc gcccgagca ggccgcatgg 120
cgggccccgc gcgggatcc ggctggaaga gagcgtacac ggctcgacg agtccggggc 180
cgatgtacca ggtgagcggc cagccccctc tggctgcgac gcgcccttat ggagccccc 240
gcgcamcccc ggcccagccc agaccytaty ccttccttcc tgggctggar gtaktaacag 300
gatccactca ccctgcggag gcagcaccag aggagggctc cctggaggag gcggcaaccc 360
ccatgcccc  aggcaatggc cctggcatcc cccagggcct ggacagcact gacctcgacg 420
tccccacaga agctgtgaca tgccagcctc aggggaaccc ttgggctgca cccacttct 480
gccgaatgac tctggccacc cctcagagct gggcggcacc agacgggagg ggaatggtgc 540
cctgggtggc cccaaggccc accggaagtt gcagacacac ccattctctg ccagccaggg 600
cagcaagaag agtaagagca gcagcaaata caccacctcc cagatcccc tccaggcaca 660
ggaagactgc tgtgtccact gcattctgtc ctgcctgttc tgcgagttcc tgacgctgtg 720
caacatcgtc ctggactgcg ccacctgtgg ctcttcgacg tcggaggact cgtgcctctg 780
ctgctgctgc tgtggctctg gcgagtgtgc cgactgcgac ctgccctgcg acctggactg 840
cgccatcctg gatgcctgct gcgagtcgcg ggactgcctg gaaatctgca tggantgctg 900
tggtgctctg ttctcctcct gagcctctgt cgggggctaa gccagcctgg cgcccctgca 960
gattccagca ggttccctct gagtggggcc agggccagga ctgtcacaca aggcttgana 1020
aagcccctct ccctggtcct ctctaccaca ccctgtgc 1058

```

<210> 109

<211> 1076

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (780)

<223> n equals a,t,g, or c

<400> 109

```

caggaggag caggaagaaa caggaggagg aacctgagac agagccgctg aagtccttgc 60
tggaagcaga tgggattaaa tgagcgacga gactgggaga gtgccagaga gagacaccaa 120
gaggatgcag gtctgtctgc tatcagctat gccgctgccc gttgcgctgc agacccgctt 180

```

```

ggccaagaga ggcatacctca aacatctgga gcctgaacca gaggaagaga tcattgccga 240
ggactatgac gatgatcctg tggactacga ggccaccagg ttggagggcc taccaccaag 300
ctggtacaag gtgttcgacc cttcctgcgg gctcccttac tactggaatg cagacacaga 360
ccttgatatcc tggctctccc cacatgaccc caactccgtg gttaccaaatt cggccaagaa 420
gctcagaagc agtaatgcag atgctgaaga aaagttggac cggagccatg acaagtcgga 480
cagggggccat gacaagtcgg accgcagcca tgagaaacta gacaggggcc acgacaagtc 540
agaccggggc cacgacaagt ytgacagggg tgcagagcgt ggctatgaca aggtagacag 600
agagagagag cgagacaggg aacgggatcg ggaccgcggg tatgacaagg cagaccggga 660
agagggcaaa gaacggcgcc accatcgccg ggaggagctg gctccctatc ccaagagcaa 720
gaaggcagta agccgaaagg atgaagagtt agaccccatg gaccctagct catactcagn 780
acgcccccg ggacgtgggt caacaggact cccaagcgg aatgaggcca agactggcgc 840
tgacaccaca gcagctgggc cctcttcca gcagcggccg tatccatccc caggggctgt 900
gctccgggcc aatgcagagg cctcccgaac caagcagcag gattgaagct tcggcctccc 960
tggccctggg ttaaaataaa agctttctgg tgatcctgcc caccaaaaaa aaaaaaaaaa 1020
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa waaaaaaatt ttgggggggg cccct 1076

```

<210> 110

<211> 1199

<212> DNA

<213> Homo sapiens

<400> 110

```

gttggtggag ttctgcccgg atggaagctc cggccgcgga gtgatgggtg cctcagcgaa 60
gatgggcccgg gcagggacca tggcgggtggc agcagaggtg gcagggggcg ggcggtggc 120
ggtagaggag gctgtggtcc tcagggggct gtaggtggag gtatggctcg ggccagcagc 180
gggaacggca gcgaggaggc ctggggggca cttcgggcgc cgcaacagca gcttcgagag 240
ctgtgcccag gagtgaacaa ccagccctac ctctgtgaga gtggtcactg ctgcggggag 300
actggtgctg gcacctacta ctatgagctc tgggtggttct ggctgctctg gactgtcctc 360
atcctcttta gctgctgttg cgccttccgc caccgacgag ctaaactcag gctgcaacaa 420
cagcagcggc agcgtgaaat caacttggtg gcctatcatg gggcatgcca tggggctggg 480
cctttcccta ccggttcaact gcttgacctt cgcttccctc gcaccttcaa gccccagcc 540
tacgaggatg tggttcaccg cccaggcaca ccaccccccc cttatactgt ggccccaggc 600
cgccccttga ctgcttccag tgaacaaacc tgctgttcct cctcatccag ctgccctgcc 660
cactttgaag gaacaaatgt ggaagggtgtt tcctcccacc agagtgcctc ccctcatcag 720
gagggtgagc ccggggcagc ggtgaccctt gcctccacac cccctcctg ccgctatcgc 780
cgtttaactg gcgactccgg tattgagctc tgcccttgct ctgcctccgg tgaggggtgag 840
ccagtcaagg aggtgagggg tagtgccacc ctgccagatc tggaggacta ctccccgtgt 900
gcactacccc cagagtctgt accgcagatc tttcccatgg ggctgtcttc cagtgaaggg 960
gacatcccat aagtagtttt gagaggggtg atgggttact tgcccaccag aaacagccct 1020
agtcccaact ccttgcggtc ctttggtccc tccctgccta cctagaatct gcctgaaagg 1080
gctggagagg ggcagtattg ggggactgtg ctagctttac ccccgagga catacacagg 1140
agcctttgat ctcatataag agatgtgaac cagctaaaaa aaaaaaaaaa aaactcgag 1199

```

<210> 111

<211> 3630

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (3606)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (3608)

<223> n equals a,t,g, or c

<400> 111

```
cggcggttggt cagtcagagc gagaacattc cagaggctgc ccagctccgg cgctgacggg 60
tgtggaccgc ggacgtcgct gggacagccc ctccccgctg ctcggcggcg gcacctggcc 120
cggccgctcc tcgctgcgct tcgcctccgc ctccctcgac tcggaactcg gtttatatcg 180
cgctcactt catcccagtc ccgggcgagc agcgttggtt ttatgtcttt atttgacgaa 240
aacgacagaa gatacaaaaa agttgcaatc aaagatctct tcatcttatt gataaagcca 300
ctaataagcc aaaatgtctg tcaatgtcaa ccgcagcgtg tcagaccagt tctatcgcta 360
caagatgccc cgtctgattg ccaaggttga gggcaaaggc aatggaatca agacagttat 420
agtcaacatg gttgacgttg caaaggcgct taatcggcct ccaacgtatc ccaccaaata 480
ttttggttgt gagctgggag cacagacca gtttgatgtt aagaatgacc gttacattgt 540
caatggatct catgaggcga ataagctgca agacatgtg gatggattca ttaaaaaatt 600
tgttctctgt cctgaatgtg agaatcctga aacagatttg catgtcaatc caaagaagca 660
aacaataggt aattcttgta aagcctgtgg ctatcgaggc atgcttgaca cacatcataa 720
actctgcaca ttcatcttca aaaaccacc tgagaatagt gacagtggta caggaaagaa 780
agaaaaagaa aagaaaaaca gaaagggcaa agacaaggaa aatggctccg tatccagcag 840
tgagacacca ccaccaccac caccaccaa tgaaattaat cctcctccac atacaatgga 900
agaagaggag gatgatgact ggggagaaga tacaactgag gaagctcaaa ggcgtcgaat 960
ggatgaaatc agtgaccatg caaaagttct gacactcagt gatgatttgg aaagaacaat 1020
tgaggagagg gtcaatatcc tctttgattt tgtaaagaaa aagaaagaag aggggtgttat 1080
tgattcatct gacaaagaaa tcgttgctga agcagaaaga ctggatgtaa aagccatggg 1140
ccctcttggt ctaactgaag ttctttttta tgagaagatt agagaacaga ttaagaaata 1200
caggcgccat ttctacgat tttgtcacia caacaaaaaa gcccaacggt accttcttca 1260
tggtttggag tgtgtggtag caatgcatca agctcagctt atctccaaga ttccacatat 1320
cttgaaggag atgtacgat cagacctttt agaagaagag gtcatcatca gctggtcgga 1380
aaaggcctct aagaaatatg tctccaaaga acttgccaaa gagattcgtg tcaaagcaga 1440
accatttata aaatggttga aggaggcaga ggaagaatct tctgggtggcg aagaagaaga 1500
tgaagatgag aacattgagg tgggtgtatt gaaggctgcc agtgtaccga aagttgagac 1560
tgtaaagtca gacaacaagg atgacgacat cgatattgat gccattttaa gggatggatg 1620
caacctagct taacagtata atgctgcaaa ttttcctcca ttatcagcca gaagtgcaac 1680
atgtatgtgc aaaagctaaa atggcttaac atcatgctac actttacact aaaaatctat 1740
tactgtgagt ggtctgttat taagcccaat gagacatcta gggagtccat acacatcagt 1800
gagcagatgt agtttgctta tttatagcat gtttcttttt gaaaaactag tgggtggacac 1860
atttgatca catttataca gttataaaaa taaagggttg attttggtcg ttcttcagat 1920
gtttggctct gaatgactta agctgaagta actggctcct tactttaaat gttctgccat 1980
catttcacct gatgagcatt cttggagcct gccagatatt gttaggtcct ggggctgcaa 2040
agaggctctc aacaggatgt aaagcaaact taattgtaat taatttatc agcccattaa 2100
gaaagtacta aagttttatc tctgtagttc ctcaaattgg catctggtta tgtacattgt 2160
gaggtagact gataatgaaa tgacagtgca acatcttaac caagaagtaa atatgacctc 2220
agtgtcctat aaataatgta agagcaggat ttgaaacttg gagagctgtt ttctcatttc 2280
atgtacactt gcccctaaat gtctttgaag tcgtgtgcat tgcacgttgg atgagccagg 2340
gaaattatta cattaacaag cattttgtgt gtacgtagta gttactttgt actgagagaa 2400
cttgcttttg ggtgcaatta ataaactgat tttatttggg agaaacaagg aagggtgcac 2460
ttaactagca acctaagcat gatttttcag tttttgcct tagggtttaa attacaattc 2520
caaatgtta gacatactgt attttttcgt tcagtgtggc ttttaatttc ccctcttgca 2580
```

```

gtttgttctg taatgccttt tacatttgga cacatagttt atscctttttt ttgggtgtaag 2640
acttgaggata ttttttactt cacattgaaat atagccaggc acccaagaag tctgatggcc 2700
acctgagtgac aggtgacaag gacctgacag agcccatgca gggctttaga tttggacaca 2760
caagagttga taacttcctc atgaactcct tgcctgatct aaactcatat tatgggttct 2820
gactgtttga gtaatcatct tcaagggttaa acctcttggc agttaccctt ttcacaaagt 2880
gcacagtggg aatcgagaat cgatagggtt aattttggag cagtggctta taccattcac 2940
ctctgttttt ttgtgattat ttcacagata atgagacctt aataacaaat aggcgtaaaa 3000
aaattttcac attgaaatga tagaaacatt tgatgtaata aaacttggtt ggcttgatat 3060
tttaaggaat tgaaacctag caatcttatt ggagagacaa gaattggctt ccagctgcct 3120
ttgatcaaga ttcgggtgca agtgagcag gagccatata cctggaggga atgtgctttg 3180
tcacacccaaa gaggattttt ttttcttcaa acttgatgtg tgcctagggt tcaaattctt 3240
tgccgcaagg ctgatctgct ttcattaact ggaattctgt aggagatact ggtgacctaa 3300
gctaagttgc actcagcata ctcagtgtca agctaattgag gttctattat aaaggttcta 3360
cttttaatct gagggaaaac atgttcaggg cttctagaac actaaaaaat ttggcttaaa 3420
ccagtgttca gtctggtgcc aaacttcgaa tggaatacaa attcacataa tctgaacttt 3480
gttcacaggt tatcctaata gagtaattct tcactttgct ctattgaact gtcttaagga 3540
tttgtttaaa cagctaagtt acttgattaa aataatgata aaattgtaaa aaaaaaaaaa 3600
aaaaantnct gsggtccgtc aagggaattc                                     3630

```

<210> 112

<211> 1526

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1496)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1511)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1512)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1515)

<223> n equals a,t,g, or c

<400> 112

```

tcgaccacg cgctccgacg aggccctgcg cgcggcaaca tggcgggggc caggtggagg 60
tcttgaggct atcagatcgg tatggcattg gcgtccgggc ccgcaaggcg ggcgctagct 120
ggctccgggc agctcggcct tgggggcttc ggggccccga gacgcggggc gtatgagtgg 180
ggcgtgcgct ccacgcggaa gtcggagcct cctcccctgg ataggggtgta cgagatccct 240
ggactggagc ccatcacctt tgcggggaag atgcacttcg tgccctggct ggcgcggccg 300
atctttccgc cctgggaccg cggctacaag gacccaaggt tctaccgctc gccccctctt 360

```

```

cacgagcatc cgctgtacaa agaccaggcc tgctatatct ttcaccaccg ttgccgcctt 420
ctcgaggggtg taaagcaggc cctctggctc accaagacca agttaataga aggccttccc 480
gagaaagtgc ttagccttgt tgatgatcca aggaaccaca tagagaacca agacgagtgc 540
gttctgaatg tgatctctca cgcccgtctc tggcagacca ctgaggaaat cccaagaga 600
gagacctact gcccggtcac cgtggacaac ctaatacagc tgtgtaaate tcagattctc 660
aagcatcctt ctctggccag gaggatctgt gtccaaaact ccacgttttc tgctacctgg 720
aaccgagagt ctcttctcct tcaagtccgt gggtctgggt gagcccgact gagcactaag 780
gatcctctgc ccaccatcgc ctccagagag gagattgaag ctactaagaa tcatgttcta 840
gagaccttct accccatcgc acccatcctc gatcttctat aatgcaatat ttatgatgtg 900
aaaaatgaca caggattcca ggaaggctat ccttaccctt atccccatac cctgtactta 960
ctggacaaaag ccaattttacg accacaccgc cttcaaccag atcagctgcg ggccaagatg 1020
atcctgtttg cttttggcag tgccctggct caggcccgcc tcctctatgg gaatgatgcc 1080
aaggctcttg agcagcccgt ggtggtgcag agcgtgggca cggatggacg tgtcttccat 1140
ttcctagtgt ttcaactgaa taccacagac ctggactcta acgaggggtg caagaatttg 1200
gcctgggtgg actcagacca gtcctcttat cagcattttt ggtgtctccc agtgatcaaa 1260
aagagagtgg ttgtggaacc tgttgggcca gttggtttca agccagagac attcagaaa 1320
tttttagctc tatatttgca tgggtgctgcg tgagcggagg accctctga atcctgaaac 1380
ccctcttgcc tctcttcac ggaagaggcc tgggccccgt ggagcctcag tgcccgtttg 1440
gcctgctgct ctgcgtgaca ataaagagcc cttgcgttgc aaaaaaaaaa aaaaangggg 1500
ggcgcgtcaa nnggncccaa gttagt 1526

```

<210> 113

<211> 585

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (422)

<223> n equals a,t,g, or c

<400> 113

```

tcgaccacg cgtccgcccc cgcgctccgc cacgcgtccg ggagcccggt gacaggatgt 60
tggtgttgg attaggagat ctgcacatcc cacaccgggt caacagtgtt ccagctaaat 120
tcaaaaaact cctggtgcca ggaaaaatc agcacattct ctgcacagga aacctttgca 180
ccaaagagag ttatgactat ctcaagactc tggctggtga tgttcatatt gtgagaggag 240
acttcgatga gaatctgaat tatccagaac agaaagtgtg gactgttgga cagttcaaaa 300
ttggtctgat ccatggacat caagtatttc catggggaga tatggccagc ttagccctgt 360
tgagagggca atttgatgtg gacattctta tctygggaca cacacacaaa tttgaagcat 420
tngagcatga aaataaatc tacattaatc caggttctgc cactggggca tataatgcct 480
tggaacaaa cattattyca tcattgtgtt gatggatc caggcttcta cagtggkcac 540
ctatgtgtaa tcagctaatt ggagatgaag tgaaagtaga acgga 585

```

<210> 114

<211> 501

<212> DNA

<213> Homo sapiens

<400> 114

```

gatgaaaaga aggtttttgc tcttcaaatg cttaagtaaa ctaaaaggca gagctggaaa 60
taaagcccgt attgtggact ccaagtaatg ctctttctgc tacaccatac tttgtggtgt 120

```

```

ctgctcccat gtgcttcttc gctaaggctg atcaaaaaag ttagtagggt gcttcagcta 180
taagaatttg atggtcttcc ttagtcatca tagtctgcag caatcatttt tgttcatcat 240
tgggatgtct gcttactcct gttgagtaaa tgtgatctat tcacccttgg ragctccttg 300
cacaccaaca gtattcttgg atagggacaa gtgttgtcta agtcagtgc gatttcttta 360
gcataataaa aggctccatg taggatgcta atacttgagt gaaatatgct tcataagcag 420
ccttgttttg acagagttgg tgtaaagtga ggttatgtct tggcctgagc gtcttcaaag 480
catgtgccac tttgtgcac t 501

```

<210> 115

<211> 1965

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (338)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (343)

<223> n equals a,t,g, or c

<400> 115

```

agagggcgga ctggcgga gagcagacgc ccgaaccgag cgagaagagc ggcagagcct 60
tatccctga agccgggccc cgctcccag mcctggccca aaggcaggag cagcagacaa 120
gagtgcagtg gtggctgccg ccgcaccagc ctcaagtggca gatgacacac cccccccga 180
gcgtcggaac aagagcggtg tcatcagtga gcccctcaac aagagcctgc gccgctccc 240
cccgtctcc cactactctt cttttggcag cagtgggtgt agtggcggtg gcagcatgat 300
gggcgagag tctgctgaca aggccactgc ggctgcanc tgnccctcct gttggccaat 360
gggcatgacc tggcggcggc catggcggtg gacaaaagca accctacctc aaagcacaaa 420
agtggtgctg tggccagcct gctgagcaag gcagagcggg ccacggagct ggcagccgag 480
ggacagctga cgctgcagca gtttgcgag tccacagaga tgctgaagcg cgtggtgcag 540
gagcatctcc cgctgatgag cgaggcggtg gctggcctgc ctgacatgga ggctgtggca 600
ggtgccgaag ccctcaatgg ccagtccgac ttcccctacc tgggcgcttt ccccatcaac 660
ccaggcctct tcattatgac ccggcagggt gtgttccttg ccgagagcgc gctgcacatg 720
gcgggccttg ctgagtaccc catgcaggga gagctggcct ctgccatcag ctccggcaag 780
aagaagcgga aacgctgcgg catgtgcgg ccctgccggc ggcgcacaa ctgcgagcag 840
tgcagcagtt gtaggaatcg aaagactggc catcagattt gcaaattcag aaaatgtgag 900
gaactcaaaa agaagccttc cgctgctctg gagaaggtga tgcttccgac gggagccgcc 960
ttccggtggt ttcagtgcag gggcggaac ccaaagctgc cctctccgtg caatgtcact 1020
gctcgtgtgg tctccagcaa gggattcggg cgaagacaaa cgatgcacc cgtctttaga 1080
acaaaaata ttctctcaca gatttcattc ctgtttttat atatatattt tttgtgtcgc 1140
ttttaacatc tccagctccc tagcataaaa agaaaaagaa aaaaatttaa actgcttttt 1200
cggaagaaca acaacaaaaa agaggtaaag acgaatctat aaagtaccga gacttcctgg 1260
gcaaagaatg gacaatcagt ttccttcctg tgtcgatgac gatgtgtct gtgcaggaga 1320
tgcaagtttt gtgtagagaa tgtaattttt ctgtaacctt ttgaaatcta gttactaata 1380
agcactactg taatttagca cagtttaact ccaccctcat ttaaacttcc tttgattctt 1440
tccgaccatg aaatagtgc tagtttgctt ggagaatcca ctcacgttca taaagagaat 1500
gttgatggcg ccgtgtagaa gccgctctgt atccatccac gcgtgcagag ctgccagcag 1560
ggagctcaca gaaggggagg gagcaccagg ccagctgagc tgcaccaca gtcccagac 1620

```

```

tgggatcccc caccccaaca gtgatttttg aaaaaaaaaat gaaagttctg ttcgtttatc 1680
cattgcgatc tggggagccc catctcgata tttccaatcc tggtacttt tcttagagaa 1740
aataagtcct ttttttcttg ccttgcta at ggcaacagaa gaaagggctt ctttgcgtgg 1800
tcccctgctg gtgggggttg tccccagggg cccctgcgc ctgggcccc ctscacggc 1860
cagcttcctg ctgatgaaca tgctgtttgt attgttttag gaaaccaggc tgttttgtga 1920
ataaaacgaa tgcattgttg tgtcacgaar maaaaaaaaa aaaaa 1965

```

<210> 116

<211> 1060

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (299)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1060)

<223> n equals a,t,g, or c

<400> 116

```

gaaacacata cattggatat gggaagatgg cggctgtgtc ggtgtatgct ccaccagttg 60
gaggcttctc ttttgataac tgccgcagaa tgccgtcttg gaagccgatt ttgcaaagag 120
gggatacaag cttccaaagg yccggaaaac tggcacgacc atcgctgggg tggctctataa 180
ggatggcata gttcttgag cagatacaag agcaactgaa gggatgggtg ttgctgacaa 240
gaactgttca aaaatacact tcatactctc taatatattat tggtgtggtg ctgggacanc 300
tgacagacaca gacatgacaa cccagctcat ttcttccaac ctggagctcc actccctctc 360
cactggccgt cttcccagag ttgtgacagc caatcggatg ctgaagcaga tgcttttcag 420
gtatcaaggt tacattggtg cagccctagt ttaggggga gtagatgtta ctggacctca 480
cctctacagc atctatcctc atggatcaac tgataagttg ccttatgtca ccatggggtc 540
tggtccttg gcagcaatgg ctgtatttga agataagttt aggccagaca tggaggagga 600
ggaagccaag aatctggtga gccaagccat cgcagctggc atcttcaacg acctgggctc 660
cggaagcaac attgacctct gcgtcatcag caagaacaag ctggattttc tccgcccata 720
cacagtggc aacaagaagg ggaccaggct tggccggtac aggtgtgaga aagggaactac 780
tgcatgcctc actgagaaaa tcaactcctc ggagattgag gtgctggaag aaacagtcca 840
aacaatggac acttcctgaa tggcatcagt ggggtggctg cgcggttct ggaagggtgg 900
gagcattgag gccagtaag aactcatgt ggctagtgtt tgccgaatga aactcaactc 960
aataaaaaac aaaaaccaa ttgggcagct gaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1020
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1060

```

<210> 117

<211> 709

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (174)

<223> n equals a,t,g, or c

<400> 117

```

aattcggcac gagaacatcc attctaaagg gctactgtcc caaatcctgt gtgtcctttt 60
gacttgtctg atcacccaat ggaagtggat acttgtaaag tctacaccac tgtacttggc 120
gttaaattctt gctgaattcg tggtaagctg ttaccatgtc tacattttgt agantgattt 180
tggctctgcag caaaattcga tttcacttct catacccctt tccttccact tgaaatgcaa 240
tttagacaga ggccctgtgg tgaaagttgc aatattaagt ttmcccttag aagatcccyt 300
cctcaaacct cagaaccctt agcagtgtta ccctwaaaca aaaatgagct cgagaaaaaa 360
gtagctcagt tacagagaag caaatcgagt tatttcccca cataaaaagt ttcccagat 420
tctaagaatt gcagtatcct gtaccctaaa atttttcaag gtgactcctg ttgtcgtctg 480
ttgataactt taataaaggc catttaagga cataagtttt taaagactcc caaagtgaaa 540
cttaaacatt ttcgggagta tcgattgcat atatcagttt atgctgtgtg ctgaattact 600
atgccatgtg ctatttttagt gtttggggaa aatgaaaaat aaaatttgtt ctttagctta 660
ataaatatgt cttattttta aaaaaaaaaa aaaaaactcg agactagct 709

```

<210> 118

<211> 2053

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (813)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2049)

<223> n equals a,t,g, or c

<400> 118

```

ctccttggcg cctgtcccca cggccccgc agcgtgacca cgatgctccc cataccccac 60
ccattcccga tacaccttac ttactgtgtg ttggcccagc cagagtgagg aaggagtgtg 120
gccacattgg agatggcggg actgagcaga catgccccca cgagtagcct gactccctgg 180
tgtgtcctcg gaaggaagat cttggggacc cccccaccgg agcacacca rggatcatct 240
ttgcccgtct cctggggacc cccaagaaa tgtggagtcc tcggggggccg tgcaactgat 300
cggggagtggt gggaagtctg gcggttggar ggggtgggtgg ggggcagtgg gggctgggcg 360
gggggagttc tggggtagga agtgggtccc ggagattttg gatggaaaag tcaggaggat 420
tgacagcaga cttgcagaat tacatagaga aattaggaac ccccaaattt catgtcaatt 480
gatctattcc ccctctttgt ttcttggggc attttccctt tttttttttt ttttgttttt 540
tttttaccct tccttagctt tatgcgtca gaaaccaa ataaaccccc ccccatgtaa 600
caggggggca gtgacaaaag caagaacgca cgaagccagc ctggagacca ccacgtcctg 660
ccccccgcca tttatcgccc tgattggatt ttgtttttca tctgtccctg ttgcttgggt 720
tgagttgagg gtggagcctc ctggggggca ctggccactg agcccccttg gagaagtcag 780
aggggagtggt agaagggcac tgtccggcct ggnctctggg gacagtggct ggtccccaga 840
agtcctgagg gcggaggggg ggggtgggca ggggtcctc aggtgtcagg aggggtgctc 900
gaggccacag gagggggctc ctggctggcc tgaggctggc cggaggggaa ggggctagca 960
gggtgtgtaaa cagagggttc catcaggctg gggcaggggt gccgccttcc gcacacttga 1020
ggaaccctcc cctctccctc ggtgacatct tgcccggccc tcagcaccct gccttgtctc 1080
caggaggtcc gaagctctgt gggacctctt gggggcaagg tggggtgagg ccggggagta 1140
gggaggtcag gcgggtctga gcccacagag caggagagct gccaggtctg cccatcgacc 1200

```



```

aggttgcttg ggccccggag cccacgggtc tggatgatgcc atagcagcca ccaccgcggc 1260
gcctaggggt gcggcagggg ctcggcctct gggaggttta cctcgcccc acttgtgccc 1320
ccagctcage cccctgcac gcagcccgac tagcagtcta gaggcctgag gcttctgggt 1380
cctggtgacg gggctggcat gaccccgagg gtcgtccatg ccagtccgcc tcagtcgcag 1440
agggtccctc ggcaagcgcc ctgtgagtgg gccattcgga acattggaca gaagcccaaa 1500
gagccaaatt gtcacaattg tggaaaccac attggcctga gatccaaaac gcttcgaggg 1560
accccaaaatt acctgcccac tcgtcaggac acccaccac ccagtgttat attctgcctc 1620
gccggagtgg gtgttcccgg gggcacttgc cgaccagccc cttgcgtccc caggtttgca 1680
gctctccctt gggccactaa ccatcctggc ccgggctgcc tgtctgacct ccgtgcctag 1740
tcgtggctct ccatcttgtc tcctccccgt gtcccaaatg tcttcagtgg ggggccccct 1800
cttgggtccc ctctctgccc atcacctgaa gacccccacg ccaaactg aatgtcacct 1860
gtgcctgccg cctcgggtcca cttgcggccc gtgtttgact caactcagct cctttaacgc 1920
taatatttcc ggcaaaatcc catgcttggg ttttgtcttt aaccttgtaa cgcttgcaat 1980
cccaataaag catataaagt catraaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2040
ggggggggnc cgg                                     2053

```

<210> 119

<211> 1824

<212> DNA

<213> Homo sapiens

<400> 119

```

agttcctagc aagctgttca caagattgcc tgataagaat atggaagctg tatataaagt 60
caacatcttt agaaactcag gatgacgata acataagact gaaggaaaat acttttacca 120
tagaaaatga aaagtgttaa aatagcattt gctgttactc tggagacagt gctagccggg 180
catgaaaact gggtaaatgc agttcactgg caacctgtgt tttacaaaga tgggtgtccta 240
cagcagccag tgagattatt atctgcttcc atggataaaa ccatgattct ctgggctcca 300
gatgaagagt caggagtttg gctagaacag gttcgagtag gtgaagtagg tgggaatact 360
ttgggatttt atgattgcca gttcaatgaa gatggctcca tgatcattgc tcatgctttc 420
cacggagcgt tgcacctttg gaaacagaat acagttaacc caagagagtg gactccagag 480
attgtcattt caggacactt tgatggtgtc caagacctag tctgggatcc agaaggagaa 540
tttattatca ctggttggtac tgatcagaca actagacttt ttgctccatg gaagagaaaa 600
gaccaatcac aggtgacttg gcatgaaatt gcaaggcctc agatacatgg gtatgacctg 660
aaatgttttg caatgattaa tcgggtttcag tttgtatctg gagcagatga aaaagttctt 720
cgggtttttt ctgcacctcg gaattttgtg gaaaattttt gtgccattac aggacaatca 780
ctgaatcatg tgctctgtaa tcaagatagt gatcttccag aaggagccac tgtccctgca 840
ttgggattat caaataaagc tgtctttcag ggagatatag cttctcagcc ttctgatgaa 900
gaggagctgt taactagtac tggttttgag tatcagcagg tggcctttca gccctccata 960
cttactgagc ctcccactga ggatcatctt ctgcagaata ctttgtggcc tgaagttcaa 1020
aaactatatg ggcacggtta tgaaatattt tgtgttactt gtaacagttc aaagactctg 1080
cttgccctcag cttgtaaggc agctaagaaa gagcatgcag ctatcattct ttggaacact 1140
acatcttgga aacagggtgca gaatttagtt ttccacagtt tgacagtcac gcagatggcc 1200
ttctcaccta atgagaagtt cttactagct gtttccagag atcgaacctg gtcattgttg 1260
aaaaagcagg atacaatctc acctgagttc gagccagttt ttagtctttt tgccctcacc 1320
aacaaaatta cttctgtgca cagtagaatt atttggctct gtgattggag tccctgacagc 1380
aagtatttct tcactgggag tgcagacaaa aagtggtgtt tctggggtga gtgtgactcc 1440
actgatgact gtattgagca caacattggc ccctgctcct cagtccctga cgtgggtggg 1500
gctgtgacag ctgtcagcgt ctgcccagtc ctccaccctt ctcaacgata cgtgggtgca 1560
gtaggattgg agtgtggaaa gatttgctta tatacctgga aaaagactga tcaagttcca 1620
gaaataaatg actggaccca ctgtgtagaa acaagtcaaa gccaaagtca tacactggct 1680
atcagaaaaat tatgctggaa gaattgcagt ggaaaaactg aacagaagga agcagaaggt 1740

```

gctgagtggg tacactttgc aagctgtggg gaagatcaca ctgtgaagat acacagagtc 1800
aataaatgtg cactgtaatg gaaa 1824

<210> 120
<211> 606
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (144)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (155)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (598)
<223> n equals a,t,g, or c

<400> 120
aggaagctgg gggaccattt tgcacccatga gtttgtgaaa aatctggatt aaaaaattac 60
tcttccagtg ttttctcatg cmaaatttyc tyctarcatg tgataatgag taaactaaaa 120
ctatttgcag cttttcctca attnacattt tggtngtata cttcagagtg atgttatcta 180
agtttaagta gtttaagtat gttaaagtgt gatcttttac accacatcac agtgaacaca 240
ctggggagat gtgctttttt ggaaaactca aagggtgctag ctccctgatt caaagaaata 300
tttctcatgt ttgttcattc tagtttatat ttccatttaa aatcctttag gttaagttta 360
agctttttta aagttagtta aaagaattga gacacaatac taatactgta ggaattggtg 420
aggccttgac ttaaaacttt ctttgtactg tgatttcctt ttgggtgtat tttgctaagt 480
gaaacttggt aaattttttg ttaactaaat ttttttctta aaataaagac tttttcacaa 540
wraaaaaaaaa aaaaaaaaaa actcgagggg gggcccgtag ccaatcgcct gtgatgtntc 600
gtatac 606

<210> 121
<211> 838
<212> DNA
<213> Homo sapiens

<400> 121
gaatcccggg tcgacccacg cgtccgggaa agatcggcgc gcaccgcagg agcaacgggtt 60
ggtcctgcgg ctgtgatgtc ggtgttgagg cccctggaca agctgcccgg cctgaacacg 120
gccaccatct tgcctggggg cagcgaggat gctcttctgc agcagctggc ggactcgatg 180
ctcaaagagg actgcgcctc cgagctgaag gtccacttgg caaagtcctt ccctttgccc 240
tccagtgtga atcgccccg aattgacctg atcgtgtttg tggttaatct tcacagcaaa 300
tacagyctcc agaacacaga ggagtccttg cgccatgttg atgccagctt cttcttgggg 360
aargtgtgtt tcctcgccac aggtgggtggm rggctttagg gccaccatgg cgcarcgcct 420
ggtgcgcgtg ctgcagatct gtgctggcca cgtgcccggt gtctcagctc tgaacctgct 480
gtccctgctg agaagctctg agggccctc cctggaggac ctgtgagggg ggctkgcccc 540

tgggctgccc cttctcatgg cttcgtgctg actccataaa cattctctgt tgaggatgtc 600
cagtcagggc ttgacaggcc caggctcagc cccccgtggc tgggaagggt ccctgcagtg 660
ccagtgtctg agcagggaga gctgggcaga agcagcgagg gggcccagct ggcgagactg 720
tagccccctc ccactcccac actcactctt gcagagcctg tgtctttaag cagctggcgt 780
gttacatctc catttaaggt ttcctttgaa caaaaggctc gtggctaaaa aaagttta 838

<210> 122

<211> 656

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (41)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (218)

<223> n equals a,t,g, or c

<400> 122

ggcacgagcg ctcttgctgc gacgcacggt cggaagcgga ncaaggtcga ggccggggtg 60
gcgccggagc cggggccgct tggagctcgt gtgggggtctc cgggccaggc cgccggcatgg 120
gcgtcctggc cgcagcggcg cgctgcctgg tccgggggtgc ggaccgaatg agcaagtgga 180
cgagcaagcg gggcccgcgc agcttcaggc gccgcaangg ccggggcgcc aagggcatcg 240
gcttcctcac ctccggctgg aggttcgtgc agatcaagga gatgggtccc gagttcgtcg 300
tcccggatct gaccggcttc aagctcaagc cctacgtgag ctacctcgcc cctgagagcg 360
aggagacgcc cctgacggcc gcgcagctct tcagcgaagc cgtggcgccct gccatcgaaa 420
aggacttcaa ggacggtacc ttcgacctg acaacctgga aaagtacggc ttcgagccca 480
cacaggaggg aaagctcttc cagctctacc ccaggaactt cctgcgctag ctgggcgggg 540
gaggggcggc ctgccctcat ctcatctcta ttaaacgcct ttgccagcta aaaaaaaaaa 600
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaggggggg gggcggacgc gtgggc 656

<210> 123

<211> 1386

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (8)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1283)

<223> n equals a,t,g, or c

<400> 123

aaccgggnaa aaggaaaccg tgttgtgtac gtaagattca ggaaacgaaa ccaggagccg 60

```

cgggtgttg cgcaaagggt actcccagac ccttttccgg ctgacttctg agaaggttgc 120
gcacagctgt gcccggcagt ctagaggcgc agaagaggaa gccatcgctt ggccccggct 180
ctctggacct tgtctcgctc gggagcggaa acagcggcag ccagagaact gttttaatca 240
tggaacaaca aaactcacag atgaatgctt ctcacccgga aacaaacttg ccagttgggt 300
atcctcctca gtatccaccg acagcattcc aaggacctcc aggatatagt ggctaccctg 360
ggccccaggt cagctaccca cccccaccag ccggccattc aggtcctggc ccagctggct 420
ttcctgtccc aaatcagcca gtgtataatc agccagtata taatcagcca gttggagctg 480
caggggtacc atggatgcca gcgccacagc ctccattaaa ctgtccacct ggattagaat 540
atttaagtca gatagatcag atactgattc atcagcaaata tgaacttctg gaagtttta 600
caggttttga aactaataac aaatatgaaa ttaagaacag ctttggacag agggtttact 660
ttgcagcggg agatactgat tgctgtacct gaaattgctg tgggccatct agacctttta 720
ccttgaggat tattgataat atgggtcaag aagtcataac tctggagaga ccactaagat 780
gtagcagctg ttgttgtccc tgctgccttc agggagataga aatccaagct cctcctgggtg 840
taccaatagg ttatgttatt cagacttggc acccatgtct accaaagttt acaattcaaa 900
atgagaaaag agaggatgta ctaaaaataa gtggtccatg tgttgtgtgc agctgttgtg 960
gagatgttga ttttgagatt aaatctcttg atgaacagtg tgtggttggc aaaatttcca 1020
agcactggac tggaattttg agagaggcat ttacagacgc tgataacttt ggaatccagt 1080
tcccttttaga ccttgatgtt aaaatgaaag ctgtaatgat tgggtgcctgt ttcctcattg 1140
acttcatgtt ttttgaaagc actggcagcc rggaacaaaa atcaggagtg tggtagtggr 1200
ttagtgaag tctcctcagg aaatctgaag tctgtatatt gattgagact atctaaactc 1260
ataccygtat grattaagcy gtnaaggcct gtagctctgg ttgtataact ttgcytttcm 1320
aattawagtt takcttctgt ataactgatt tataaagggt tttgtacatt ttttaatact 1380
cattgg 1386

```

<210> 124

<211> 845

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (823)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (825)

<223> n equals a,t,g, or c

<400> 124

```

ggcagagggt cacaccgga agcagggggc cgaggcggag ccggccgcga tgagcgggga 60
gccggggcag acgtccgtag cggccccctc cgaggaggtc gagccgggca gtgggggtccg 120
catcgtggtg gagtactgtg aaccctgcgg cttcgaggcg acctacctgg agctggccag 180
tgctgtgaag gagcagatc cgggcacgga gatcgagtcg cgcctcgggg gcacaggtg 240
ctttgagata gagataaatg gacagctggg gttctccaag ctggagaatg ggggctttcc 300
ctatgagaaa gatctcattg aggccatccg aagagccagt aatggagaaa ccctagaaaa 360
gatcaccaac agccgtcctc cctgcgtcat cctgtgactg cacaggactc tgggttcctg 420
ctctgttctg ggttccaaac cttgggtctc ctttggctct gctgggagct cccctgcct 480
ctttccccta cttagctcct tagcaaagag accctggcct ccactttgcc ctttgggtac 540
aaagaaggaa tagaagattc cgtggccttg ggggcaggag agagacactc tccatgaaca 600
cttctccagc cacctcatat ccccttccca gggtaagtgc ccacgaaagc ccagtccact 660

```

```

cttcgcctcg gtaatacctg tctgatgcc cagattttat ttattctccc ctaaccacagg 720
gcaatgtcag ctattggcag taaagtggcg ctacaaacac taaaaaaaaa aaaaaaaaaa 780
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa atntnggggg ggggcccccc 840
cccccc 845

```

<210> 125

<211> 1656

<212> DNA

<213> Homo sapiens

<400> 125

```

ctccccactcc tgcctcgcac tccccttctc catccttgcc cgccctcccc ccgagtcctc 60
ctcaccgccc ggactctcca ctgttcaact cgagatgcag ctctccactc cagctcaatc 120
tgctgcagct ggaggagctc ccccgctgctg agggggctgc tggtgcagga ggccctggga 180
gcagtgcggg gccccacact cccartgcgg aggctgctga gccagaggcc agactggcgg 240
aggtcactga gtcctccaat caggacgcac tttccggctc cagtgcactg ctcgaaactc 300
tgctgcaaga rgactcgcgc tccggcacag gctccgcagc ctccgggctcc ttgggctctg 360
gcttgggctc tgggtctggt tcaggctccc atgaaggggg cagcacctca gccagcatca 420
ctcgcagcag ccagagcagc cacacaagca aatactttgg cagcatcgac tcttccgagg 480
ctgaggctgg ggctgctcgg ggcggggctg agcctgggga ccagggtgatt aagtacgtgc 540
tccaggatcc catttggtg ctcatggcca atgctgacca gcgcgtcatg atgacctacc 600
agggtgccctc cagggacatg acctctgtgc tgaagcagga tcgggagcgg ctccgagcca 660
tgcagaagca gcagcctcgg ttttctgagg accagcggcg ggaactgggt gctgtgact 720
cctgggtccg gaagggccaa ctgcctcggg ctcttgatgt gatggcctgt gtggactgtg 780
ggagcagcac ccaagatcct ggtcaccctg atgacccact cttctcagag ctggatggac 840
tggggctgga gcccatggaa gagggtgagg gcgagcaggg cagcagcggg ggcggcagtg 900
gtgagggaga gggctgcrag gaggcccaag gcggggccaa ggcttcaagc tctcaggact 960
tggttatgga ggaggaggaa gaaggcagga gctcatccag tccagcctta cctacagcag 1020
gaaactgcac cagctagact ccattctggg accatctcca ggagtccatg agaggctttc 1080
ttctcctatg tcccaattct cagaactcag atgtggctag accaaccagt gggaaactgc 1140
cccagcttct cccaccatag ggggcccggac ccccatgcac cagcctagga tccaggggct 1200
gcctctggcc tcttagggag cagagagcag aactccgcag cccagcccag aggagtgtca 1260
cctcccacct ttggagagga atccttccct cccctggaca aagttgctga caagctgctg 1320
aagtggcctc tccatattcc agctgagcct gaatctgact cttgaggggt ggggctgcac 1380
ttattttattg cggggagaca gctctctctc ccacctctc cccagatggg aggagagcct 1440
gaggcccaag caggacccgg gggttccagc ccctagctgc tctggagtgg gggaggttgg 1500
tggaacctgg agtccctggt gctgcccctc aggtgggacc caggcgttct cagctgtacc 1560
ctctgccgat ggcatttggt tttttgatat ttgtgtctgt tactactttt ttaatacaaa 1620
aagataaaaa cgcccaaaaa aaaaaaaaaa aaaacc 1656

```

<210> 126

<211> 837

<212> DNA

<213> Homo sapiens

<400> 126

```

tggaagtgtg ccctgtttgc tttttataaa ccaaactcta tctgaaatcc caacaaaaaa 60
aatttaactc catatgtggt cctcttggtc taatcttgct aaccagtgc aagtaccgac 120
aaaattccag ttattttatt ccaaaatggt tggaaacagt ataatttgac aaagaaaaat 180
gatacttctc tttttttgct gttccaccaa atacaattca aatgcttttt gttttatttt 240
tttaccaatt ccaatttcaa aatgtctcaa tgggtgctata ataaataaac ttcaaacactc 300

```

```

tttatgataa caacactgtg ttatattctt tgaatcctag cccatctgca gagcaatgac 360
tgtgtctcacc agtaaaagat aacctttctt tctgaaatag tcaaatacga aattagaaaa 420
gccctcccta ttttaactac ctcaactggg cagaaacaca gattgtattc tatgagtcctc 480
agaagatgaa aaaaaatttta tacgttgata aaacttataa atttcattga ttaatctcct 540
ggaagattgg tttaaaaaga aaagtgtaat gcaagaattt aaagaaatat ttttaaagcc 600
acaattatatt taatattgga tatcaactgc ttgtaaagggt gtcctctctt tttcttgtca 660
ttgtcgtgtca agattactaa tatttgggaa ggctttaaaag acgcatgtta tgggtgcta 720
gtactttcac ttttaaactc tagatcagaa ttgttgactt gcattcagaa cataaatgca 780
caaaatctgt acatgtctcc catcagaaaag attcattggc atgccacagg ggattct 837

```

<210> 127

<211> 1217

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1168)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1169)

<223> n equals a,t,g, or c

<400> 127

```

gatcgcggaaggggcacgg gaagcggttg ggggtgctctg ggaagtatta tggggccttg 60
gtacgccgag gctgcgggac cggrcctggc tgacttaatc ttcgttcccc acacatttgt 120
ttccgcagtt cgaagcccag ttgggcccag caggtggagg aggaggggga ggacgacaaa 180
tgtgtcacca gcgagctcct caaggggatc cctctggcca caggtgacac cagcccagag 240
ccagagctac tgccgggagc tccactgccg cctcccaagg aggtcatcaa cggaaacata 300
aagacagtga cagagtacaa gatagatgag gatggcaaga agttcaagat tgtccgcacc 360
ttcaggattg agacccggaa ggcttcaaag gctgtcgcaa ggaggaagaa ctggaagaag 420
ttcgggaact cagagtttga ccccccgga cccaatgtgg ccaccaccac tgtcagtgc 480
gatgtctcta tgacgttcat caccagcaaa gaggacctga actgccagga ggaggaggac 540
cctatgaaca aactcaaggg ccagaagatc gtgtcctgcc gcatctgcaa gggcgaccac 600
tggaaccacc gctgccccta caaggatacg ctggggccca tgcagaagga gctggccgag 660
cagctgggccc tgtctactgg cgagaaggag aagctgccgg gagagctaga gccggtgcag 720
gccacgcaga acaagacagg gaagtatgtg ccgccgagcc tgcgcgacgg ggccagccgc 780
cgcggggagt ccatgcagcc caaccgcaga gccgacgaca acgccaccat ccgtgtcacc 840
aacttgtcag aggacacgcg tgagaccgac ctgcaggagc tcttccggcc tttcggtctc 900
atctcccga tctacctggc taaggacaag accactggcc aatccaaggg ctttgccttc 960
atcagcttcc accgccgcga ggatgctgcg cgtgccattg ccggggtgtc cggttttggc 1020
tacgaccacc tcatcctcaa cgtcgagtgg gccaaagccg ccaccaacta agccagctgc 1080
cactgtgtac tcgggtccggg acccttggcg acagaagaca gcctccgaga gcgcgggctc 1140
caagggcaat aaagcagctc cactctcnna aaaaaaaaaa aaaaaaaaaa ggcggccgct 1200
cgcatctag aactagc 1217

```

<210> 128

<211> 1349

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (57)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1133)

<223> n equals a,t,g, or c

<400> 128

```
tggacgcgtg ggtggcggcc ggaggaggag taggtgcggg tgaagatggc ggcagcngag 60
gccgcgaact gcatcatgga ggtgtcctgt ggccaggcgg aaagcagtga gaagcccaac 120
gctgaggaca tgacatccaa agattactac tttagactcct acgcacactt tggcatccac 180
gaggagatgc tgaaggacga ggtgcgcacc ctcaattacc gcaactccat gtttcataac 240
cggcacctct tcaaggacaa ggtggtgctg gacgtcggct cgggcaccgg catcctctgc 300
atgtttgctg ccaaggccgg ggcccgcgaag gtcacggga tcgagtgttc cagtatctct 360
gattatgcgg tgaagatcgt caaagccaac aagttagacc acgtggtgac catcatcaag 420
gggaaggtgg aggaggtgga gctcccagtg gagaaggtgg acatcatcat cagcgagtgg 480
atgggctact gcctcttcta cgagtccatg ctcaacaccg tgctctatgc ccgggacaag 540
tggctggcgc ccgatggcct catcttccca gaccgggcca cgctgtatgt gacggccatc 600
gaggaccggc agtacaaga ctacaagatc cactggtggg agaacgtgta tggcttcgac 660
atgtcttgca tcaaagatgt ggccattaag gagcccctag tggatgtcgt ggaccccaaa 720
cagctggtca ccaacgcctg cctcataaag gaggtggaca tctataccgt caaggtggaa 780
gacctgacct tcacctcccc gttctgcctg caagtgaagc ggaatgacta cgtgcacgcc 840
ctggtggcct acttcaacat cgagttcaca cgctgccaca agaggaccgg cttctccacc 900
agccccgagt ccccgtagac gcaactggaag cagacggtgt tctacatgga ggactacctg 960
accgtgaaga cgggcgagga gatcttcggc accatcggca tgcggcccaa cgccaagaac 1020
aaccgggacc tggacttcac catcgacctg gacttcaagg gccagctgtg cgagctgtcc 1080
tgctccaccg actaccggat gcgctgaggc ccggctctcc cgccctgcac gancccaggg 1140
gctgagcgtt cctaggcggg ttccgggctc ccccttcctc tccctccctc ccgcagaagg 1200
gggttttagg ggccctgggct ggggggatgg ggagggcaca tcgtgactgt gtttttcata 1260
acttatgttt ttatatgggt gcatttacgc caataaatcc tgcagctggg aaaaaaaaaa 1320
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1349
```

<210> 129

<211> 2318

<212> DNA

<213> Homo sapiens

<400> 129

```
tgcgcacgga cgtgctcgag ttctctctgc tctccgctct cggccgctag ctctcctccc 60
ttccgctcct gcttctctcc gggctctccc ctccagctcc agccccacce ggccggtccc 120
gcacggctcc gggtagccat ggaggacccc acgctctata ttgtcgagcg gccgcttccc 180
gggtaccccc acgccgaggc cccggagcct tccctcgctg gggctcaggc agcggaggag 240
ccgtcggggg ccggctcaga agagctgac aagtcggacc aggtgaacgg cgtgctggtg 300
ctgagcctcc tggacaaaat catcggggcc gtagaccaga tccagctgac tcaagcacag 360
ctggaggagc ggcaggcgga gatggagggc gcagtgcaga gcatccaggc cgagctgagc 420
aagctgggca aggcgcacgc accacgagca atacggtgag caagctgctg gagaaggtgc 480
```

```

gcaaggtcag cgtcaacgtg aagaccgtgc ggggcagcct ggagcgcag. gcggggcaga 540
tcaagaagct ggaggtcaac gaggccgagc tgctkcggcg ccgcaacttt aaagtcatga 600
tctaccagga tgaagtgaag ctgccggcca aactgagcat cagcaaactg ctgaaagagt 660
cggagggcgt gccagagaag gaggggcagg agctgggcga gggcgagcgg ccagggagga 720
cgcagcggcg ctgsagcttt cgtcggacga ggcgggtggag gttgaggagg ttattgagga 780
gtcccgcgca gagcgtatca agcgcgrgcc ctgcggcgcg tggacgactt caagaaggcc 840
ttctccaagg agaagatgga gaagaccaag gtgcggtacyc gcgagaacct ggagaagacg 900
cgcctcaaga ccaaggaaaa cctggagaag acgcggcaca ccctggagaa gcgcatgaac 960
aagctgggca cgcgcctggt gcccgcgag cggcgcgaga aactgaagac gtcgcgggac 1020
aagttgcgca aatccttcac gcccgaccac gtggtgtacg cgcgctccaa gaccgcggtc 1080
tacaagggtc cacccttcac cttccacgtc aagaagatcc gcgagggcca ggtggaagtg 1140
ctcaaggcca ccgagatggt ggaggtgggc gccgacgacg acgagggcgg cgcgagcgc 1200
ggggaggccg gcgacctgcg gcgcgggagc agccccgacg tgcacgcgct gctggagatc 1260
accgaggagt cggacgccgt gctggtggac aagagcgaca gcrctgagc cgcccccgct 1320
gccacccacc ccattcctcg ctcttccga acttcctctt tcgcattctc tctcggtcgc 1380
agctggctga gatttttcta aattgaaaac acgccccct cccacacct ccaggaactc 1440
cactcccagt cttagagctg ttaggaccg atggggaggc agccccgca gtggacagcc 1500
cccgttgga cacagtccga gtggaatgg aagggaatgg tcaatccctg tcctggttgt 1560
ccaagtggg atctcagagg aaattgcagt gattccacgg ttaggcccc ctgggggggc 1620
tgcttcccc tcagcctctc cccacaccac ccacccagct gctgtcattc cgctcactga 1680
gctcttcttc attctcacc tgatccctgg gggactcaaa gccaaaactg cccaaagagg 1740
aaagattgaa tcctaaagg gatccttgcc cccatgggag gccccctact agaaggacgt 1800
gaaagcagct tttgggggaa actgaggcag tggggaagac agagcagaat gagccctcac 1860
cctggctggg ggtccagcac aggtgtatc tgcagagggt ccagaggaa cgctggagcc 1920
aagagaagcc ctgggaagga ggggtgggga acgacatgca tgtgagggat ggcacactga 1980
tgtgtttatg cacctgtaca caggagcgca tggccatggc tttggaaagg agaattgaaa 2040
aatagaagaa ggtcggccgg gcttgggtgc ttawgcctgt taaccccagc actttgggag 2100
gccgaggtgg gcggtwcacc tgaagtcagg agttcgggac cagcctggca aacaccccat 2160
ctctactaag cgaaaacca tctctactaa aattacaaaa attagctggg catggttgcg 2220
catgcctgta aatcccagct actttgggag gctgaggtgg ggagaattgc ttgaacctgg 2280
ggaggtggga ggttgacgtt gagccaaggt tcgcgaca 2318

```

<210> 130

<211> 2149

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (787)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (819)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1518)

<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (2116)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (2147)
<223> n equals a,t,g, or c

<400> 130

```
aactctaata gatcatacag gaaacggtag ctgcagtagc gtcggaattc ccgggtcgac 60
ccacgcgtcc ggagaaggca gacgcatccc gaactcgctg gaggacaagg ctcagctctt 120
gccaggccaa attgagacat gtctgacaca agcgagagtg gtgcaggtct aactcgcttc 180
caggctgaag cttcagaaaa ggacagtagc tcgatgatgc agactctgtt gacagtgacc 240
cagaatgtgg aggtcccaga gacaccgaag cctcaaaggc actggagggtc tcagaggatg 300
tgaagggtctc aaaagcctct ggggtctcaa aggccacaga ggtctcaaag accccagagg 360
ctcgggaggc acctgccacc caggcctcrt ctactactca gctgactgat acccaggttc 420
tggcagctga aaacaagagt ctagcagctg acaccaagaa acagaatgct gaccgcaggg 480
ctgtgacaat gcctgccact gagacaaaaa aggtcagcca tgtggctgat acaaagggtca 540
atacaaaggc tcaggagact gaggtgcac cctctcaggc cccagcagat gaacctgagc 600
ctgagagtgc agctgcccag tctcaggaga atcaggatac tcggcccaag gtcaaagcca 660
agaaagcccg aaaggtgaag catctggatg gggaagagga tggcagcagt gatcagagtc 720
aggcttctgg aaccacaggt ggccgaaggt ctcaaaggcy ctaatggcct caatggcccc 780
cagcttncaa ggggtcccat agccttttgg gcccgcagna tcaaggactc ggttggtgc 840
ttgggcccgg agagccttgc tctccctgag atcacctaaa gcccgtaggg caaggctcgc 900
cgtagagctg ccaagctcca gtcattccaa gagcctgaag caccaccacc tcgggatgtg 960
gcccttttgc aagggagggc aaatgatttg gtgaagtacc ttttggctaa agaccagacg 1020
aagattccca tcaagcgctc ggacatgctg aaggacatca tcaaagaata cactgatgtg 1080
taccgccaaa tcattgaacg agcaggctat tcyttggaga aggtatttgg gattcaattg 1140
aaggaaattg ataagaatga ccacttgtag attcttctca gcaccttaga gccactgat 1200
gcaggcatatc tgggaacgac taaggactca cccaagctgg gtctgctcat ggtgcttctt 1260
agcatcatct tcatgaatgg aaatcgggtc agtgaggctg tcatctggga ggtgctgcgc 1320
aagttggggc tgcgcctggg atacatcatt cactcttttg ggacgtgaag aagctcatca 1380
ctgatgagtt tgtgaagcag aagtacctgg actatgccag agtccccaat agcaatcccc 1440
ctgaatatga gttcttcttg ggcctgcgct ctactatga gaccagcaag atgaaagtcc 1500
tcaagtttgc ctgcaagnta caaaagaagg atcccaagga atgggcagct cagtaccgag 1560
aggcgatgga agcrgatttg aaggctgcag ctgaggctgc agctgaagcc aaggctaggg 1620
ccgagattag agctogaatg ggcattgggc tcggctcgga gaatgctgcc gggccctgca 1680
actgggacga agctgatatc ggaccctggg ccaaagcccg gatccaggcg ggagcagaag 1740
ctaaagccaa agcccaagag agtggcagtg ccagcactgg tgccagtacc agtaccaata 1800
acagtgccag tgccagtgcc agcaccagtg gtggcttcag tgctggtgcc agcctgaccg 1860
ccactctcac atttgggctc ttcgctgggc ttggtggagc ttggtgccag accagtggca 1920
gctctggtgc ctgtgggttc tcctacaagg gagattttag atattgttaa tcctgccagt 1980
ctttctcttc aagccagggg gcatcctcag aaacctactc aacacagcac tctaggcagc 2040
cactatcaat caattgaagt tgacactctg cattaaatct atttgccatt tcaaaaaaaa 2100
aaaaaaaaa actcgnnggg gggcccggta cccaattggc ccatagnng 2149
```

<210> 131
<211> 1020

<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (11)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1019)
<223> n equals a,t,g, or c

<400> 131
ctcgtgcgta naaggcagcg ccccgagag ctcttgccg tcttggtctt gcctgggtgc 60
gggtggttagt ttctgcgact tgtgttgga ctgctgatat gaagatgtct tcaggaaatg 120
ctaaaattgg gcaccctgcc cccaacttca aagccacagc tggtatgcca gatggtcagt 180
ttaaagatat cagcctgtct gactacaaag gaaaatatgt tgtgttcttc tttaccctc 240
ttgacttcac ctttgtgtgc cccacggaga tcattgcttt cagtgatagg gcagaagaat 300
ttaagaaact caactgccaa gtgattgggtg cttctgtgga ttctcacttc tgtcatctag 360
catgggtcaa tacacctaag aaacaaggag gactgggacc catgaacatt cctttggtat 420
cagacccgaa gcgcaccatt gctcaggatt atggggtctt aaaggctgat gaaggcatct 480
cgttcagggg cctttttatc attgatgata aggggtattct tcggcagatc actgtaaatg 540
acctccctgt tggccgctct gtggatgaga ctttgagact agttcaggcc ttccagttca 600
ctgacaaaaca tggggaagtg tgcccagctg gctggaaacc tggcagtgat accatcaagc 660
ctgatgtcca aaagagcaaa gaatatctt ccaagcagaa gtgagcgctg ggctgtttta 720
gtgccaggct gcggtgggca gccatgagaa caaacctct tctgtatttt tttttccat 780
tagtaaaaca caagacttca gattcagccg aattgtgggtg tcttacaagg caggcctttc 840
ctacaggggg tggagagacc agcctttctt cctttggtag gaatggcctg agttggcgtt 900
gtgggcaggc tactggtttg tatgatgtat tagtagagca acccattaat cttttgtagt 960
ttgtattaaa cttgaactga gaaaaaaaaa aaaaaaaaaa aaaccccggtg gggggcccn 1020

<210> 132
<211> 2319
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (10)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (2246)
<223> n equals a,t,g, or c

<400> 132
acggctcggn attcccgggt cgaccacgc gtccgctacc tttgaaaggt cagtgcctgc 60
ttgggggtgg gggcgggcca gcactcactg tttgcttccc caggccagct ggagggtatc 120
ttgggaccgg cggtgatgc aggatgacaa ccggggccta ggccaagggc tcaaggacaa 180

caagagaacc tgcaaccggt tccgcctcct gctagagcgg cgaaccrtgg gcagtgaggt 240
ccaagatagc cactctacca gctacccatc cctcctcagc cacctgacct ccatgtacct 300
gaacgccccg gcgctcgctc tgccctgtagc caggatgcag ctcccaggcc ctggctctgcg 360
ctcattttcat cctctggcct cctcactgcc ctgtgacttc cacctgctca acctacgtac 420
gctccaggct gaggaggaca ccctaccctc ggcggagacc gcaactcatct tacaccgcaa 480
ggttttgact gcggcctgga ggcaagaact tgggcttcaa ctgcaccaca agccaaggca 540
aggtagccct gggcagcctt ttccatggcc tggatgtggg attccttcag ccaacctcct 600
tgacgttact gtaccctctg gcctccccgt ccaacagcac tgacgtctat ttggagccca 660
tggagattgc tacctttcgc ctccgcttg gttagggtt cttgtggcct gaagagaaaag 720
ttcattcaca gagactgcct cttaacatga agatcattgg acaagccaca cgggtatccc 780
atcccgatct gcctcccaga actgtgacac actgggctct gccytcatct tctgtttatt 840
gctgctgctg tgttttcggc gcaaccaca aaccagtgga tgggtaaata gggcagacgc 900
catgagatca gggagagaag gcccttggtc agagtgggca gtgccaggct ctgctttggg 960
ttgtgagtgg acaccaact gggcacaggc tcaggcacc atcctttttc caaacaggga 1020
tatagaagtg gtggaaggc acagaaggc taaggaggc taagtgggt acagcccag 1080
atcagggtca ctgtggcaac agcaggctct aggggaatcc tgtggttatg tagagactcc 1140
atgtcctggt gtgatgagca ggatcagagt gactctggga ggacaggggt ggggaccag 1200
agttagcagt ggggatggag cagtagaagg aatcactgtt tctcctagga gtctgaaggc 1260
ctcgtctgct tctgtgatgg ctttgcagta agtgccgctt ggctgcatg cattggctaa 1320
caggctgcag aatggcagga aggactcgct agagattgtc atggccagag atcataggtc 1380
acttcaggta gcaagacccc tggcaaaactt ggcacttggc ctatgtactg atttgtggga 1440
tgggtggcagg ggtgtggggc ccttcaccct gcctgaattc tctttggctt ctgtgctctg 1500
tatgctgctg tccccaaarg ctctttctta ttatggcagg gagtggggat tggctctact 1560
ttctttctct ggaaaggaaa gcctccaaga ctccatgtgc ttgggcagct tgagaaggcg 1620
ttcagacca cgcctagcag gcagacctt aagcctcacc tttagtctat ctgcagagg 1680
attcagttcc tggcacagg gactaggggc atgtagagta tatgaggagg cagtatggct 1740
gtgcaggagc cttcatttca gcttcaatta atagggaaga atttatgata gctctataga 1800
tgctgaaaag gtatttcgta agatttaaaa tccatccctt attaaaactc ttagtaaaatt 1860
aagtctggaa agaaacaccc taatctagat aaaggtctgt ttcagaaacc aacagtgatg 1920
gcattctaaa gagtcagacg ccacaggcat tccattaaa gtcagaaact agccaagggc 1980
aagctattat tcagcagtgt cccggcacta ctaaccctg caacaagcca gatgagggaac 2040
ataaggaaga attataattg tcattatttg tagacaataa aactgcctac ctgtaaaacc 2100
taagaatcaa ctgaagacct gttaagagta ttctgtaagt caacccaatg atacacatca 2160
tgttcctgtc cacatactgg ttttcccaa atcagctgat aaattcagt taattccaat 2220
gagatgaaac tttggaattg acagtnctaa agtgcattgg gagagtgaat gtgtgagaac 2280
actaagacca ctctgaacga tgataatgag tttgggggt 2319

<210> 133

<211> 1373

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (403)

<223> n equals a,t,g, or c

<400> 133

cgcgaccgga agtccgtcac tctcgcgagg ccccagagag caggcgctgg gcagtgtgga 60
ggtcgttggg gtcacttccg cgtcaccagc tcctgtgcct gccagtcggg gcccctcccg 120
ctccagccat gctctccgcc ctcgcccggc ctgccagcgc tgctctccgc cgcagcttca 180

```

gcacctcggc ccagaacaat gctaaagtag ctgtgctagg ggccctctgga ggcatcgggc 240
agccactttc acttctcctg aagaacagcc ccttggtgag ccgcctgacc ctctatgata 300
tcgcgcacac acccggagtg gccgcagatc tgagccacat cgagaccaa ggcgctgtga 360
aaggctacct cggacctgaa cagctgcctg actgcctgaa agnttgtgat gtggtagtta 420
ttccggctgg agtccccaga aagccaggca tgacccgga cgacctgttc aacaccaatg 480
ccacgattgt ggccaccctg accgctgcct gtgcccagca ctgcccggaa gccatgatct 540
gcgtcattgc caatccgggt aattccacca tccccatcac agcagaagtt ttcaagaagc 600
atggagtgt caacccaac aaaatcttcg gcgtgacgac cctggacatc gtcagagcca 660
acacctttgt tgcagagctg aagggttttg atccagctcg agtcaacgtc cctgtcattg 720
gtggccatgc tgggaagacc atcatcccc tgatctctca gtgcacccc aaggtggact 780
ttccccagga ccagctgaca gactcactg ggcgatcca ggaggccggc acggaggttg 840
tcaaggctaa agccggagca ggctctgcca ccctctccat ggcgatgcc ggcgccgctg 900
ttgtcttctc ccttgtggat gcaatgaatg gaaagggaag tgttgtggaa tgttcttcg 960
ttaagtcaca ggaaacggaa tgtacctact tctccacacc gctgctgctt gggaaaaagg 1020
gcacgcagaa gaacctgggc atcggcaaag tctctcttt tgaggagaag atgatctcgg 1080
atgccatccc cgagctgaag gcctccatca agaaggggga agatttcgtg aagaccctga 1140
agtgcgcgc tgtgacgggt ggccagtttc cttaatttat gaaggcatca tgtcactgca 1200
aagccgttgc agataaactt tgtattttaa tttgctttgg tgatgattac tgtattgaca 1260
tcatcatgcc ttccaaattg tgggtggctc tgtgggcgca tcaataaaaag ccgtccttga 1320
ttttattttt caaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 1373

```

<210> 134

<211> 1657

<212> DNA

<213> Homo sapiens

<400> 134

```

ggaacaagtg cctgtagtgt gtttggatct gtaccctacg actgattata cgggtgaatgt 60
gaccctgctg agatctccta agcggcactc agtcaaataa caatagcaac tccccagca 120
gtaaaacaga ccatcagtaa catttcagga tttaatgaaa cctgcttgag atggagaagc 180
atcaagacag ctgatatgga ggagatgtat ttattccaca tttggggcca gagatggtat 240
cagaaggaat ttgccagga aatgaccttt aatatcagta gcagcagccg agatcccag 300
gtgtgcttgg acctacgtcc gggtagcaac tacaatgtca gtctccgggc tctgtcttcg 360
gaacttcctg tggatcatctc cctgacaacc cagataacag agcctcccct cccggaagta 420
gaatttttta cgggtgcacag aggacctcta ccacgcctca gactgaggaa agccaaggag 480
aaaaatggac caatcagttc atatcaggtg ttagtgcttc ccctggccct ccaaagcaca 540
ttttcttctg attctgaagg cgcttcctcc ttcttttagca acgcctctga tgctgatgga 600
tacgtggctg cagaactact ggccaaagat gttccagatg atgccatgga gatacctata 660
ggagacaggc tgtactatgg ggaatattat aatgcaccct tgaaaagagg gagtgattac 720
tgcattatat tacgaatcac aagtgaatgg aataaggtga gaagacactc ctgtgcagtt 780
tgggctcagg tgaaaagattc gtcactcatg ctgctgcaga tggcgggtgt tggactgggt 840
tccctggctg ttgtgatcat tctcacattc ctctccttct cagcgggtgt atggcagatg 900
gacactgagt ggggaggatg cactgctgct gggcaggtgt tctggcagct tctcaggtgc 960
ccgcacagag gctccgtgtg acttccgtcc agggagcatg tgggcctgca actttctcca 1020
ttcccagctg ggcccaattc ctggatttaa gatggtggct atccctgagg agtcaccata 1080
aggagaaaac tcaggaattc tgagtcttcc ctgctacagg accagttctg tgcaatgaac 1140
ttgagactcc tgatgtacac tgtgatattg accgaagsta catacagatc tgtgaatctt 1200
ggctgggact tctctgagat gatgcctgag ggtcagctcc tctagacatt gactgcaaga 1260
gaatctctgc aacctcctat ataaaagcat ttctgttaat tcattcagaa tccattcttt 1320
acaatatgca gtgagatggg cttaagtttg ggctagagtt tgactttatg aaggaggtca 1380
ttgaaaaaga gaacagtgac gtaggcaaat gtttcaagca ctttagaaac agtacttttc 1440

```

ctataattag ttgatatact aatgagaaaa tatactagcc tgccatgccataaagtgtcc 1500
tgctgtgtct gttaggcagc attgctttga tgcaatttct attgtcctat atattcaaaa 1560
gtaatgtcta cattccagta aaaatatccc gtaattaaaa aaaaaaaaaa aaaaaaaaaa 1620
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa ggcggcc 1657

<210> 135

<211> 2360

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1517)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2330)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2353)

<223> n equals a,t,g, or c

<400> 135

ggcagcagcg cagttgcgtg aggggtttgt rctatcctcg gtgctgtggt gcagagctag 60
ttcctctcca gctcagccgc gtaggtttgg acatatttga ctcttttccc cccaggttga 120
attgaccaaa gcaatgggtga tggagaagcc tagtcccctg ctggtcgggc gggaatttgt 180
gagacagtat tacacactgc tgaaccaggc cccagacatg ctgcatagat tttatggaaa 240
gaactcttct tatgtccatg ggggattgga ttcaaattga aagccagcag atgcagtcta 300
cggacagaaa gaaatccaca ggaaagtgat gtcacaaaac ttcaccaact gccacaccaa 360
gattcgccat gttgatgctc atgccacgct aaatgatggg gtggtagtcc aggtgatggg 420
gcttctctct aacaacaacc aggttttgag gagattcatg caaacgtttg tccttgctcc 480
tgaggggtct gttgcaaata aattctatgt tcacaatgat atcttcagat accaagatga 540
ggtcttttgg gggtttgtca ctgagcctca ggaggagtct gaagaagaag tagaggaacc 600
tgaagaaaga cagcaaacac ctgagggtgg acctgatgat tctggaactt tctatgatca 660
ggcagttgtc agtaatgaca tggagaaca tttagaggag cctgttgctg aaccagagcc 720
tgatcctgaa ccagaaccag aacaagaacc tgatatctgaa atccaagagg aaaagcctga 780
gccagtatta gaagaaactg cccctgagga tgctcagaag agttcttctc cagcacctgc 840
agacatagct cagacagtac aggaagactt gaggacattt tcttgggcat ctgtgaccag 900
taagaatctt ccacccagtg gagctgttcc agttactggg ataccacctc atgttggttaa 960
agtaccagct tcacagcccc gtccagagtc taagcctgaa tctcagattc caccacaaaag 1020
acctcagcgg gatcaagag tgcgagaaca acgaataaat attcctcccc aaaggggacc 1080
cagaccaatc cgtgaggctg gtgagcaagg tgacattgaa ccccgaagaa tggtagagaca 1140
ccctgacagt caccaactct tcattggcaa cctgcctcat gaagtggaca aatcagagct 1200
taaagatttc tttcaaagtt atggaaacgt ggtggagtgt cgcattaaca gtggtgggaa 1260
attaccaat tttggttttg ttgtgtttga tgattctgag cctgttcaga aagtccttag 1320
caacaggccc atcatgttca gaggtgaggt ccgtctgaat gtcgaagaga agaagactcg 1380
agctgccagg gaaggcgacc gacgagataa tcgccttcgg ggacctggag gccctcgagg 1440
tgggctgggt ggtggaatga gaggccctcc ccgtggaggc atggtgcaga aaccaggatt 1500

```

tggagtggga arggggnttg cgccacggca gtgaatcttc atggatcttc atgcagccat 1560
acaaaccctg gttccaacag aatggtgaat tttcgacagc ctttggtatc ttggagtatg 1620
accccagtc tttataaaact gcttaagttt gtataatttt actttttttg tgtgttaatg 1680
gtgtgtgctc cctctccctc tcttcccttt cctgaccttt agtctttcac ttccaatttt 1740
gtggaatgat attttaggaa taacggactt ttaaagaagc aaaaaaaaaa actgaatttc 1800
cttgcttact ttgcataatac agactggatt tttttttttt ttacagcca tttcccaaaa 1860
ggaatgtctt gcatattact gacatttggg atgtttcatt cattggaata tttcttattt 1920
tctacgtgtt tgaaaagcct gtaagaaata caggatttga taatattttg aaggcaggaa 1980
aaacccaaat tgtttcttct ttgagagtca tgactacctt ctggtgtgga gaaattgcc 2040
ttggaaaatt tgacaatttt gattctcact ggtatgttta aaaactgaat aaaaggaata 2100
gaattttttt ttgataaagg atcacaaaac aattctaaaa cctaactgtt tttaccattg 2160
aaatttaaat tgtgataata ggttttaaat gtctagaatg caactgatag gcttttcttg 2220
aactgttaag ttttttgaag tagttttttc cakgtttaat ttgtatttgg ttaaaaaaac 2280
maaaaggcca aaaattcccc aaaaccccg ttaaccacca grgscaaacn gttgtggcct 2340
tcccaattaa cntgggatt 2360

```

<210> 136

<211> 1042

<212> DNA

<213> Homo sapiens

<400> 136

```

gccggtggct gctgtctctg ggcgggccgt gggaggctcc cgagggtgggg gccggggcg 60
gatggctgca gcggcgccg gggccgggag cgggccctgg gcggcccagg agaagcagtt 120
cccgcggcg ctgctgagtt tcttcatcta caaccgcgc ttcgggcccgc gcgaaggaca 180
ggaggaaaat aagattttat tttatcatcc aaatgaggta gaaaagaatg agaagattag 240
aaatgtcggg ttgtgtgaag ctattgtaca gtttacaagg acatttagcc catcaaaacc 300
tgcaaaatct ttacatacac agaagaacag acagtcttc aatgaaccag aagaaaattt 360
ctggatggtc atggttgttc ggartcctat aattgaaaaa cagagtaaag atggaaaacc 420
agttattgaa tatcaagagg aggagtgtt ggacaagggt tatagctcgg tgctgcggca 480
gtgctacagc atgtacaagc tttttaatgg tacatttctg aaagccatgg aagacggagg 540
cgtcaagctt ctgaaagaaa gattagagaa attcttccat cggattttgc aaacgctaca 600
tttgacgtca tgtgacctac ttgacatttt tgggtggaatc agcttcttcc cgttgataa 660
aatgacttat ttgaaaatcc agtcctttat taatagaatg gaggaaagcc tgaatatagt 720
caaatacact gcttttctct ataacgatca gctcatctgg agtggtattag aacaagatga 780
catgagaatt ttatacaaat accttaccac ctccctttty ccaaggcaca tcgaacctga 840
gttagcagga agggattctc caataagagc agaaatgccg ggaaatcttc aacactatgg 900
aagatttctt accggaccct tgaacctcaa tgatccagat gcaaaatgca gattcccaaa 960
aatttttgta aatacagwtg acacttatga agagctccat ttaatcgktt ataaggyctg 1020
agaagaacc ccagtttaag tt 1042

```

<210> 137

<211> 1037

<212> DNA

<213> Homo sapiens

<400> 137

```

ggcaccggga gcggcggtt ggtctacgct gtgcgcggcg gacgtcggag gcagcgggga 60
gcggagcggg gccgcgggg cctctccagg gccgcagcg cagcagttgg gcccccgcc 120
ccggccggcg gaccgaagaa cgcaggaagg gggccggggg gacccgcccc cgcccgccg 180
cagccatgaa ctccaacgtg gagaacctac cccgcacat catccgctg gtgtacaagg 240

```

```

aggtagacgac actgaccgca gacccacccg atggcatcaa ggtctttccc aacgaggagg 300
acctcaccga cctccagggtc accatcgagg gccctgaggg gaccccatat gctggagggtc 360
tggtccgcat gaaactcctg ctggggaagg acttccttgc ctccccaccc aagggctact 420
tcctgaccaa gatcttcac ccgaacgtgg gcgccaatgg cgagatctgc gtcaacgtgc 480
tcaagaggga ctggacggct gagctgggca tccgacacgt actgctgacc atcaagtgcc 540
tgctgatcca ccctaacccc gagtctgcac tcaacgagga ggcggggccgc ctgctcttgg 600
agaactacga ggagtatgcr gctcggggccc gtctgctcac agagatccac gggggcgccg 660
gcggggcccag cggcagggcc gaagccgggc gggccctggc cagtggcact gaagcttcct 720
ccaccgaccc tggggcccca gggggcccgg gaggggctga ggggcccatg gccaagaagc 780
atgctggcga gcgcgataag aagctggcgg ccaagaaaaa gacggacaag aagcgggcgc 840
tgcgggcggt gtagtgggct ctcttctctc ttccaccgtg accccaacct ctctgtccc 900
ctccctccaa ctctgtctct aagttattta aattatggct ggggtcgggg agggtagag 960
gggactggg acctggattt gtttttctaa ataaagttgg aaaagcaaaa aaaaaaaaaa 1020
aaaaaaaaaa aaaaaaa 1037

```

<210> 138

<211> 1490

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1225)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1239)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1348)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1452)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1487)

<223> n equals a,t,g, or c

<400> 138

```

cggcacgagg tggattcttg tccatagtgc atctgcttta agaattaacg aaagcagtgt 60
caagacagta aggattcaaa ccatttgcca aaaatgagtc taagtgcatt tactctcttc 120
ctggcattga ttgggtgtac cagtggccag tactatgatt atgattttcc cctatcaatt 180
tatgggcaat catcaccaaa ctgtgcacca gaatgtaact gccctgaaag ctacccaagt 240
gccatgtact gtgatgagct gaaattgaaa agtgtaccaaa tgggtgcctcc tggaatcaag 300

```

tatctttacc ttaggaataa ccagattgac catattgatg aaaaggcctt tgagaatgta 360
actgatctgc agtggctcat tctagatcac aaccttctag aaaactccaa gataaaaggg 420
agagttttct ctaaattgaa acaactgaag aagctgcata taaaccacaa caacctgaca 480
gagtcgtgg gcccaacttc caaatctctg gaggatctgc agcttactca taacaagatc 540
acaaagctgg gctcttttga aggattggta aacctgacct tcatccatct ccagcacaat 600
cggctgaaaag aggatgctgt ttcagctgct tttaaaggtc ttaaactact cgaatacctt 660
gacttgagct tcaatcagat agccagactg ccttctgggc tccctgtctc tcttctaact 720
ctctacttag acaacaataa gatcagcaac atccctgatg agtatttcaa gcgttttaat 780
gcattgcagt atctgcgttt atctcacaac gaactggctg atagtggaaat acctggaaat 840
tctttcaatg tgtcatccct gggtgagctg gatctgtcct ataacaagct taaaaacata 900
ccaactgtca atgaaaacct tgaaaactat tacctggagg tcaatcaact tgagaagttt 960
gacataaaga gcttctgcaa gatcctgggg ccattatcct actccaagat caagcatttg 1020
cgtttggatg gcaatcgcat ctcaraaacc agtcttcac cggatatgta tgaatgtcta 1080
cgtgktgcta acgaagtcac tcttaattaa tatctgtatc ctggaacaat attttatggk 1140
tatgkttttc tgtgkgtcag ttttcatagt atccatawtt tawtactgkk tattacttcc 1200
atgaatttta aaatctgagg gaaangtttg taaacattna tttttttaa gaaaagagaa 1260
aggcaggcct attcatcaca agaacacaca catatwcacg aatagacatc aaactcatgc 1320
tttatttgta aatttagtgt ttttttantt ctacgtcaaa gatgtgcaaa accttttacg 1380
gttgaggaa acagccagtt ttaaaatcct taaacttaag ttcctcaagc tggataaaac 1440
ataggagtac cncatgcaca tatctgaaca tcaatgtcgg taaaatnggg 1490

<210> 139

<211> 1684

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (93)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (201)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1657)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1659)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1682)

<223> n equals a,t,g, or c

<400> 139

```
tcgacccacg cgtccggcgg gctgagccac agcaggggtcg ccgcgggggtc ccggggccggt 60
getcccctgc cctccggga gcgcgcgggg cgnggcgggg cggggcggga ccaggcgggc 120
gagctgggcc ctgccccctc cctcgggcgg tcacctgggc acgggcgctg cagggtgctcg 180
ggcctcaacc ttgcggaacc nacagccatc gatcctcggg tggcctcgag gtggtggcag 240
ggccgcccc tgcagtccgg agacgaacgc acggaccggg cctccggagc argttcgggt 300
ggaargaamc gctctcgstt cgtcctacac ttgcgcaaat gtctccgagc ttactcacat 360
agcatattgg tatatcaaaa tgaaatgcaa ggaacaaaaa ataacataat tgaaggcagt 420
aaaagtgaat ttaaatagga agatcatcag tcaaggaaga cccactggag aggacagaaa 480
atgaagcagt gttttatcat gtgtatttca gcaggctctt ttgaaattta actaaaaata 540
tgactgctct ctcttcagag aactgctctt ttcagtacca gttacgtcaa acaaaccagc 600
ccctagatgt taactatctg ctattcttga tcatacttg gaaaatatta ttaaataatcc 660
ttacactagg aatgagaaga aaaaacacct gtcaaaattt tatggaatat ttttgcattt 720
cactagcatt cgttgatctt ttacttttgg taaacatttc cattatattg tatttcaggg 780
attttgtact ttaagcatt aggttcacta aataccacat ctgcctattt actcaaatata 840
tttcttttac ttatggcttt ttgcattatc cagttttcct gacagcttgt atagattatt 900
gcctgaattt ctctaaaaca accaagcttt catttaagtg tcaaaaatta ttttatttct 960
ttacagtaat ttaatttgg atttcagtcc ttgcttatgt tttgggagac ccagccatct 1020
accaaagcct gaaggcacag aatgcttatt ctcgctactg tcctttctat gtcagcattc 1080
agagttactg gctgtcattt ttcatggtga tgattttatt tgtagctttc ataacctgtt 1140
gggaagaagt tactactttg gtacaggcta tcaggataac ttctatatg aatgaaacta 1200
tcttatattt tcctttttca tcccactcca gttatactgt gagatctaaa aaaatattct 1260
tatccaagct cattgtctgt tttctcagta cctgggttacc atttgacta cttcaggtaa 1320
tcattgtttt acttaaagt cagattccag catatattga gatgaatatt ccctggttat 1380
actttgtcaa tagttttctc attgctacag tgtattgggt taattgtcac aagcttaatt 1440
taaaagacat tggattacct ttggatccat ttgtcaactg gaagtgtctc ttcattccac 1500
ttacaattcc taatcttgag caaattgaaa agcctatatc aataatgatt tgktaatt 1560
attaattaaa agttacagct gtcataagat cataatttta tgaacagaaa gaactcagga 1620
catattaaaa aataaactgr actaaaacaa aaaaaancna aaaaaaaaaa aaaagggcgg 1680
cnac 1684
```

<210> 140

<211> 427

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (395)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (417)

<223> n equals a,t,g, or c

<400> 140

```
ggacttcctc ccagcacatt cctgcactct gccgtgtcca cactgcccc cagacccagt 60
cctccaagcc tgetgccagc tccctgcaag cccctcaggt tgggccttgc cacgggtgcca 120
gcaggcagcc ctgggctggg ggtaggggac tccctacagg cacgcagccc tgagacctca 180
gagggccacc ccttgagggt ggccaggccc ccagtggcca acctgagtgc tgccctctgcc 240
```

accagccctg ctggccctg gttccgctgg cccccagat gcctggctga gacacgccat 300
ggcccttcag ctggccca cytyttccc gscctggaa kttggcaytg cagcagacag 360
ytccytgggc accagrcagy taacaggaca cagcngccag cccaaacagc agcgggnatg 420
ggggcag 427

<210> 141

<211> 889

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (60)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (698)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (889)

<223> n equals a,t,g, or c

<400> 141

ggcagcaggt tgacgtcctg tagcatttgc tgttctagaa agtacagaga cacgtagaan 60
agatgggagg atctagaagg aggctgtctc ctgtgtagtg tatatttata tgtaagttag 120
ccgttgggga aggattgaat acagagacgc tgtctgcttg ctgccttaag acagctagct 180
gaattgctga ttaactttta aaatacccag cttgggtttat ttttcttaga atctgttgct 240
aagactgggg acgctgtttt cttttacaaa gggaaatcta agttaatttc aaggcattcg 300
aaatggggaa agactattat tgcatttttg gaattgagaa aggagcttca gatgaagata 360
ttaaaaaggc ttaccgaaaa caagccctca aatttcatcc ggacaagaac aaatctcctc 420
aggcagagga aaaatttaaa gaggtcgcag aagcttatga agtattgagt gatcctaaaa 480
agagagaaat atatgrtcag tttggggagg aagggttgaa aggaggagca ggaggtactg 540
atggacaagg aggtaccttc cgggtacacct ttcattggcg tcctcatgct acatttgctg 600
catttttcgg aggggtccaa ccctttgaaa ttttcttttg aagacgaatg ggtggtggtg 660
gagattctga agaaatggaa atagrtggtg atccttttag tgcctttggt ttcagcatga 720
atggatatcc aagagacagg aattctgttg ggccatccc cctcaaaca gatcctccag 780
ttattcatga acttagagta tcacttgaag agatatatag tggttgtacc aaacgggatg 840
aaagatttct cgaaaaagg taaaacgctg atggtaggag ttacagttn 889

<210> 142

<211> 1505

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1493)

<223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (1499)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (1500)
 <223> n equals a,t,g, or c

<400> 142
 agtgaggggaa gcgatgggcg cgggaatggc cggcccacgg gtcgcaggag acgggacgcc 60
 agctttttggc tccgttccgc tggctccttc gtcagtactg acacctcggg cttgtagagc 120
 acttcacgca gcaaaagcgc cccccgtcta tatcatatcg cctctcggtc ctccataaag 180
 tcgtatgaga tggagctgga ggaggggaag gcaggcagcg gactccgcca atattatctg 240
 tccaagattg aagaactcca gctgattgtg aatgataaga gccaaaacct ccggaggctg 300
 caggcacaga ggaacgaact aaatgctaaa gttcgcctat tgcgggagga gctacagctg 360
 ctgcaggagc agggctccta tgtgggggaa gtagtccggg ccatggataa gaagaaagtg 420
 ttggtcaagg tacatcctga aggtaaatth gttgtagacg tggacaaaaa cattgacatc 480
 aatgatgtga caccgaattg ccgggtggct ctaaggaatg acagctacac tctgcacaag 540
 atcctgcccc acaaggtaga cccattagtg tcatgatga tggaggagaa agtaccagat 600
 tcaacttatg agatgattgg tggactggac aaacagatca aggagatcaa agaagtgatc 660
 gagctgcctg ttaagcatcc tgagctcttc gaagcactgg gcattgctca gccaaggga 720
 gtgctgctgt atggacctcc aggcactggg aagacactgt tggcccgggc tgtggctcat 780
 catacggact gtacctttat tcgtgtctct ggctctgaat tggtagagaa attcataggg 840
 gaaggggcaa gaatggtgag ggagctgttt gtcatggcac ggggaacatgc tccatctatc 900
 atcttcatgg acgaaatcga ctccatcggc tcctcgcggc tggagggggg ttctggaggg 960
 gacagtgaag tgcagcgcac gatgctggag ttgctcaacc agctygacgg ctttgaggcc 1020
 accaagaaca tcaaggttat catggctact aataggattg atatcctgga ctcggcactg 1080
 cttcgccag ggcgattga cagaaaaatt gaattcccac cccccaatga ggaggcccg 1140
 ctggacattt tgaagattca ttctcggaag atgaacctga cccgggggat caacctgaga 1200
 aaaattgctg agctcatgcc aggagcatca ggggctgaag tgaaggcggt gtgcacagaa 1260
 gctggcatgt atgccctgcg agaacggcga gtccatgtca ctcaggagga ctttgagatg 1320
 gcagtagcca aggtcatgca gaaggacagt gagaaaaaca tgtccatcaa gaaattatgg 1380
 aagtgagtgg acagcctttg tgtgtatctc tccaataaag ctctgtgggc caagtcaaaa 1440
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aanggggggnn 1500
 ccccc 1505

<210> 143
 <211> 1235
 <212> DNA
 <213> Homo sapiens

<400> 143
 cggacgggtgg gtagcggcgg cggcgctggc accccggccc cggcgggccc cggcggacgg 60
 cgggcaaaagg tcccaggaaag gtggcgctcag catctgcagc cgcgtcgacg ttgtcggagc 120
 ctccgcggag gacccaggag agccggacta ggaccagggc cctgggcctc cccacactcc 180
 ccatggagaa gctggcggcc tctacagagc cccaagggcc tcggccggtc ctggccgtg 240
 agagtgtcca ggtgcccgat gaccaagact ttcgcagctt ccggtcagag tgtgaggctg 300
 aggtgggctg gaacctgacc tatagcaggg ctgggggtgtc tgtctgggtg caggctgtgg 360

```

agatggatcg gacgctgcac aagatcaagt gccggatgga gtgctgtgat gtgccagccg 420
agacactcta cgacgtccta cacgacattg agtaccgcaa gaaatgggac agcaacgtca 480
ttgagacttt tgacatcgcc cgcttgacag tcaacgctga cgtgggctat tactcctgga 540
ggtgtcccaa gccctgaag aaccgtgatg tcatcaccct ccgctcctgg ctccccatgg 600
gcgctgatta catcattatg aactactcag tcaaacatcc caaataccca cctcgaaag 660
acttgggtccg agctgtgtcc atccagacgg gctacctcat ccagagcaca gggcccaaga 720
gctgcgtcat cacctacctg gccaggtgg accccaaagg ctccttacc aagtgggtgg 780
tgaataaatc ttctcagttc ctggctccca aggccatgaa gaagatgtac aaggcgtgcc 840
tcaagtaccc cgagtggaaa cagaagcacc tgcctcactt caagccgtgg ctgcacccgg 900
agcagagccc gttgccgagc ctggcgctgt cggagctgtc ggtgcagcat gcggactcac 960
tggagaacat cgacgagagc gcggtggccg agagcagaga ggagcggatg ggcggcgcgg 1020
gcggcgaggg cagcgacgac gacacctgc tcacctgagc gycgcaccgc ttcaggagacg 1080
gagacaggac cgggcgagcc ctggggcggc ggccgctcct gcactttctc ccctcccca 1140
cccggcacct ggtggcaccg ggccaggccc aggcgggtgc tgcagcctgg ctggacagag 1200
cccaataaa cgatcccaca gcctcaaaaa aaaaa 1235

```

<210> 144

<211> 1420

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1385)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1396)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1400)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1410)

<223> n equals a,t,g, or c

<400> 144

```

gcaagaacgg agctgactga ggaaccaact ggagggtctt cactctctcc ttccccagtg 60
tacaaaacca gttttctgca acattcagga gccaaatgag gaaaaagaat caagaatctg 120
actcacagcc catctgatct gttcaaagct gtcttttcca cctgctgaaa ttcattaaat 180
cactggaggc atgcataatg aatggagaat gagtgaactt ccaatgcaac ttggattcac 240
aaaccatta tcatagccaa tatgcagatt ttaaacagca ttccacattt catttgacca 300
tgtcttcttt ttgcacgc ctgctgcaga attccctact agaattgtgaa acaacgaaca 360
aaccacagaa cttagagtgt gctggttagt cacataactt agtagcagga ttgtgtatcc 420
aggcacaaag gtgtctttgc taatgttctc ttgtacctg ccctgcttca aacgctaaat 480
ggtatgggtc tttctttgtt gccagccata ttctacaaat aagacttttc aatatagtta 540

```

```

tgagtaatat aattttatgt acatataatg ttagaatatt gtacagaatc ttggtttcta 600
cgatgcgctt ttcttgtttc aaaaagagga aaatgcttga tttttgttga tgatactttt 660
gttactgtcc ttaattttcc atagtttggt ttcttaattg tgctcactaa gcatcgatct 720
gtgctgatgc caagctatgg actatgtacg caagaccgag caatagacag aggtgcctag 780
ggtccaaaca cactgaacgc acgtggaccg cctggwtcag gagcctcatc agacccttct 840
ccatgcacat ccttcccaaa cagtcacaga ttccattgaa aggagcagat tctatcagtt 900
cttctgtgca gactttaaga gctgaacggt ctgggttctgg aagccatgtg actgcgagca 960
acaacctaag aaaccctttg tgccttgagg ggtcgttgac ctctccttcc gggtcggagc 1020
agtcactctg agggcaaagc gtggtccact gtgtgtgatg ttttcaggat gctaggggtca 1080
aagaaagaaa ccaagtggta cataagccca gcttttctgc tgggctaagt gtaagtgtga 1140
gtaacatggt caagcccctc ttttttgggc tatgtaaagc ctttcctgcc ttgcattaat 1200
gctatctccc tgtgtactgt ttctcttaaa tggagcagat agaaatctgc agtgttggtca 1260
gataggtgga tgggagaggg atggataatt ttatcttctg ggccacagag ctggcagccc 1320
cagtttgtcc agagtctttt aaatggaaac ccccaaatcc atcccttctt ttccctaacc 1380
cccangggga tattcntagn attaagggcn cgggataagt 1420

```

<210> 145

<211> 1919

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1882)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1898)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1919)

<223> n equals a,t,g, or c

<400> 145

```

gccccgcgct ccggccgctc gtccgcccgg cttgaggccc gcgggggagcg cggcgcaatt 60
cgtcggcccc cgggggggcg gcctcccggc atcttcgcgg cgaccaagga ctaccaggaa 120
ggggagcggc tgggatggcg cgtccggggc ccgskagtac aaagcgggag acctgggtctt 180
cgccaagatg aagggtacc cgcactggcc ggcccggatt gatgaactcc cagagggcgt 240
gtgaagcctt cagcaaaca gtatcctatc ttctttttg gcacccatga aactgcattt 300
ctaggtccca aagacctttt tccatataag gagtacaaag acaagtttg aaagtcaaac 360
aaacggaaaag gatttaacga aggattgtgg gaaatagaaa ataaccagc agtaaagt 420
actggctacc aggcaattca gcaacagagc tcttcagaaa ctgagggaga aggtggaaat 480
actgcagatg aagcagtgga ggaagaagg gatagagtag aagaagatgg aaaaggcaaa 540
agaaagaatg aaaaagcagg ctcaaaacgg aaaaagtcac atacttcaaa gaaatcctct 600
aaacagtccc ggaaatctcc aggagatgaa gatgacaaag actgcaaaga agaggaaaac 660
aaaagcagct ctgaggggtg agatgcgggc aacgacacaa gaaacacaac ttcagacttg 720
cagaaaacca gtgaaggag ctaactacca taatgaatgc tgcatattaa gagaaaccac 780
aagaagggtta tatgtttggt tgtctaatat tcttggtatt gatatgaacc aacacatagt 840

```

ccttggtgtc attgacagaa cccagtttg tatgtacatt attcatattc ctctctggtg 900
tgtttcgggg ggaaaagaca ttttagcctt ttttaaaagt tactgattta atttcatggt 960
at ttggtgtc atgaagttgc ccttaaccac taaggattat caagattttt gcgcagacct 1020
atacatgtct aggatccttt tatcaaggca gttatgatca tcgttttcct gccttgacct 1080
caccatcatc aaacactcag ttaaataata attaacattt tttagatgac cactcaacat 1140
aatgcttaag aatggaattt cctctctgtg acagaaccca ggaattaatt cctaaatata 1200
taacgttggt atattgaaga cgaaattaaa attgtccttc agttttgagg ccatgtgtaa 1260
agtttaacca tattgtaaaa tatctattcc gtattagaaa tagctagttg acagcttata 1320
cttctcaaaa ttcattattgt tatgtacaca aactaagttt ctatatgtga agttagttag 1380
tctttttgtg ttactccaaa ataaaggcaa tgatttattt ttttcccagt gccaatataa 1440
ttttgagcta agcactcaag gtggatactt tacattttta agctggaatc agcaacagcc 1500
ctatgggaaa ccagacaaa cattgacttt taaatgtaga cttttaaaat aaactgtttt 1560
cttttggaaac tacaattaga atagttaata ttcattcctta aaccattatt atgtgtacat 1620
tattgttgct atgtgtataa tagagaattt tattttattt tatgccagct tatattgtga 1680
gaacacattt agtcagtttg ggttttatca atcctgttaa tgcttgctct tggaacatct 1740
ttcgcgtatt cacggtttgt agttgaaaag tttactgtaa aaaaatcaaa aacaaaaaaa 1800
tgtattgttt ttacagaata aatttattgg aatgtgwact ggggagtaag atttgaggtt 1860
gtaagcaaac taagttagtg tnaattggcc tccaatangt aacgtggagg cattaatgn 1919

<210> 146

<211> 1379

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (925)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1371)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1377)

<223> n equals a,t,g, or c

<400> 146

gcccacgcgt ccgcccacgc gtccgcccac gcgtccgccc acgcgtccgg taagttttaga 60
tgactggtca atatcttaaa aatgtatatt agtaagaagt tcttcctgga atttttcttt 120
cgattctggc agaataaaca ggtgttttta gttttccac tgtctgagcc aagcaggacc 180
ctgtcccaga gcaagagatg tccccttcca tctctgacct ttgcctggga caagctttga 240
tgggggggccc cagcttcaag gctgtggtgg gaacagcacc cccaaatgcc agcctctcct 300
ttcttcccat ccaccagtat actgcggggc catttctggt ctttgtccaa caggaaaccc 360
at ttctggtg ggatattgct tccagtggca cagggccact caccatgc atctctgtcc 420
tgcccgtcag tgctgggacg gacagcaagg gcaagccag tgtctggcrg atagggtgggt 480
gggaacagag aggggagaat gccgtcctaa gcttctgctt ggggatcccc cacacgacct 540
gggtactgcc tgggaaacct gtcctaagta aaactatgga cctcgccctg cccaccggcc 600
tgcaagcca gcatctccgt gaaggtggat ggaagcgctt ttgtcctcay tttgagctgc 660

aagctgggtc agcgggtctg aagccctcga gtgactttct aacccaagac ccagcccctg 720
gcaggaggag ggtgggtgca gggctgggtg gacaaaaaga ggcctcagca ggcctggaag 780
acccttccag tacatcccac agcgtgtcga gcagctggga gaacctgtgt caagctcgag 840
ccgtcatagg tccccatgag gtgtctgaag ccccttcttg gtgatgggag gcagagggtgc 900
tgacgttctg gagcatggac gtgantcytc aagctggctc cgcgtgggcc cttggagggt 960
gccagggtgtg tggtgacctt ctggatgcct ttaacttcat ggctgcgtca ttcctgattt 1020
agaactttaa ccggagcttc atctagtgtat tgcaaaactg gaccaatggg aggacggcgc 1080
gcagcccgtc cctccgtgg aatggagctc agctcttcgg aggcacaaa gcacctgtcg 1140
cctccgtggt cccctgccc agggagtgcg gcctctgcaa ggttcggggg tggcttcgtt 1200
tgctggagt ggccggccct gcttggtcca tgtggatgtt tgtgagcctc ggtcctacag 1260
cactgtgtag gctgcatctg tttcgtgctg gtccgtgtga cttgtatgat atccacaaat 1320
aaatattttc atggcaaaaa aaaaaaaaaa aaaaaaaaaa aaaagggggg nccccnaa 1379

<210> 147

<211> 514

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (3)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (406)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (412)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (418)

<223> n equals a,t,g, or c

<400> 147

ttnggaaact gatcacttat caaggcttta tatattcttt acggatttag acatcaccaat 60
accaagaagc ttactccatc tattccggtc tttgtaggac aggccttcatt tttcagccca 120
tgttctgtaa gccacacagt atgcctgcag aagctgctta tcggagccaa atataattgt 180
cagtacaatt taaagaccac tatgtgtccc cggagaccaa cctgtttatt tccctgaaag 240
accgcaacac cccacacaa atgtttcaga catttggacc ttgttagata agacacttgt 300
aggagaaaga gatttcttaa attaatagtc ttatatacc ctagagaagg ccatacaaat 360
ctgcggacgc gtgggcggac gcgtgggggg accgtgggtc gaacgnaccc ancgtccncg 420
gacgcgtggg cggacgcgtg ggcggacgcg tggcgacgc cgtgggcgga cgcgtgggcg 480
gacgcgtggg cggacgcgtg ggcggacgcg tggg 514

<210> 148

<211> 2058

<212> DNA

<213> Homo sapiens

<400> 148

```
gtgagccgcg gcgccccggg agcctaccca gcacgcgctc cgccccactg gttccctcca 60
gccgcccgcg tccagcccag tccccactcc ggagtcgccc ctgccgcggg gacatgggcc 120
tctgcgttca gggacctcgt cctttgctgg ctgtggagcg gactgggcag cggccccctgt 180
gggccccgtc cctggaactg cccaagccag tcatgcagcc cttgcctgct ggggccttcc 240
tcgaggaggt ggcagagggg accccagccc agacagagag tgagccaaag gtgctggacc 300
cagaggagga tctgctgtgc atagccaaga ctttctccta ctttcgggaa tctggctggg 360
attgggggtc cattacggcc agcgaggccc gacaacacct gcagaagatg ccagaaggca 420
cgttcttagt acgtgacagc acgcacccca gctacctgtt cacgctgtca gtgaaaacca 480
ctcgtggccc caccaatgta cgcattgagt atgccgactc cagcttccgt ctggactcca 540
actgcttgct caggccacgc atcctggcct ttcgggatgt ggtcagcctt gtgcagcact 600
atgtggcctc ctgcaactgt gataccggaa gcgacagccc cgatcctgct cccaccccg 660
ccctgcctat gcctaaggag gatgcgccta gtgaccagc actgcctgct cctccaccag 720
ccactgctgt acacctaaaa ctggtgcagc ctttgtacg cagaagcagt gccgcagcc 780
tgcaacacct gtgccgcctt gtcatacaacc gtctgggtggc cgacgtggac tgcccgccac 840
tgccccggcg catggccgac tacctccgac agtaccctt ccagctctga ctgtacgggg 900
caatctgccc accctcacc agtcgcaccc tggaggggac atcagcccca gctggacttg 960
ggccccact gtccctcctc caggcatcct ggtgcctgca tacctctggc agctggccca 1020
ggaagagcca gcaagagcaa ggcatgggag aggggaggtg tcacacaact tggaggtaaa 1080
tgccccagg ccgcatgtgg cttcattata ctgagccatg tgtcagagga tggggagaca 1140
ggcaggacct tgtctcacct gtgggctggg cccagacctc cactcgcttg cctgccctgg 1200
ccacctgaac tgtatgggca ctctcagccc tggtttttca atccccaggg tcgggtagga 1260
cccctactgg cagccagcct ctgtttctgg gaggatgaca tgcagaggaa ctgagatcga 1320
cagtgactag tgacccttg ttgaggggta agccaggcta ggggactgca caattataca 1380
ctatttatat atttattctc cttgggggtt gtgtcagggg cgagccaacc ccacctctat 1440
gccctgagcc ctggtagtcc agagacccca actctgccct ggcttctctg gttcttccct 1500
gtggaaaagg catcctgaga catcttgctg gaaccaaggc aatcctggat gtcctgggtac 1560
tgaccacccc gtctgtgaat gtgtccactc tcttctgccc ccagccatat ttggggagga 1620
tggaacaact caataggtaa gaaaatgcag ccggagcctc agtccccagc agagcctgtg 1680
tctaccccc tcacaggaca gagctgtatc tgcatagagc tgggtctcact gtggcgagg 1740
ccccggggg agtgccctgt ctgtcaggaa gagggggtgc tggtttgagg gccaccactg 1800
cagtctgct aggtctgctt cctgccagg aggtgcctg cacatgagag gagagaaata 1860
cacgtctgat aagacttcat gaaataataa ttatagcaaa gaacagtttg gtggtctttt 1920
ctcttccact gatttttctg taatgacatt atacctttat tacctcttta ttttattacc 1980
tctataataa aatgatacct ttcattgtaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2040
aaaaaaaaaa aaaaaaag                                     2058
```

<210> 149

<211> 1781

<212> DNA

<213> Homo sapiens

<400> 149

```
ggcaattact aaggaaggat tgtatttatg aggataactt cattatttct ctctcttttt 60
aaatctctca ttaggtggct atggaggctt ttacaacagt gatggatatg gaggaatta 120
taactcccag ggggttgact ggtggggtaa ctgagcctgc tttgcagtag gtcaccctgc 180
caaacaagct aatatggaaa ccacatgtaa cttagccaga ctataccttg ttagcttca 240
agaactcgca gtacattacc agctgtgatt ctccactgaa attttttttt taaggagct 300
```



```

caaggtcaca agaagaaatg aaaggaacaa tcagcagccc tgttcagaag gtggtttgaa 360
gacttcattg ctgtagtttg gattaactcc cctcccgcct acccccatcc caaactgcat 420
ttataatfff gtgactgagg atcatttggt tgtaaatgta ctgtgccttt aacttttagac 480
aactttttat tttgatgtcc tgttggctca gtaatgctca agatatcaat tgttttgaca 540
aaataaattt actgaacttg ggctaaaatc aaaccttggc acacaggtgt gatacaactt 600
aacaggaatc atcgattcat ccataaataa tataaggaaa aacttatgcg gtagcctgca 660
ttagggcttt ttgatacttg cagattgggg gaaaacaaca aatgtcttga agcatattaa 720
tggaattagt ttctaattgt gcaaactgta ttaagttaa gttctgattt gctcactcta 780
tcctggatag gtatttagaa cctgatatgc ttaagccat tccagtcag atgaggtgat 840
gtatgaatac atgcatacat tcaaagcact gttttcaaag ttaatgcaag taaatacagc 900
aattcctctt tcaacgttta ggcagatcat taattatgag ctagccaaat gtgggcatac 960
tattacaggg aaagtftaaa ggtctgataa cttgaaatag gtttttagga gaattcatct 1020
acttagactt tttaaatgcc tgccataaat gaaattgaaa tggtagaatg gctgaccaca 1080
gcaatgacca gccctcatta gggccctgga tgatttttgg tctaataacg catgctagtg 1140
ttgatgtttt ttggtcaaga gggatgaac aggaagaatt aaatgcagca ggctttattt 1200
taaatgccga ttcacattac tctgttcaag ctgcgttgag atgttaaact ggcttactat 1260
agacttcgta aaaatggctc cagaagagta acaaactgaa atctttgaga tcacacaggt 1320
tggaatatat tacataactg cacaaggtgt caattctgct ctacagtgc gttttagtca 1380
gttttagttg cataggtttc cattgtattt atagtctgtt tatgctaaat ctggccaaag 1440
atgagcattg tccaccacta aaatgcctct gccactttga attctgtgct aattttgtgg 1500
ccagaatgag gtgatcaaaa cgctccatct ttttacagt gcataggaag acggcaaaaa 1560
tttctaaag tgcaatagat tttcaagtgt attgtgcctt gttctaaaac ttttattaag 1620
taggtgcact tgacagtatt gaggtcattt gttatggtgc tatttcaatt agtctaggtt 1680
taggcccttg tacattttgc ccataacttt ttacaagtac ttcttttatc gcwcattaaa 1740
agcggggggc ctaatcacta tgccggattg aggcgcagag g 1781

```

<210> 150

<211> 1709

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1612)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1660)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1678)

<223> n equals a,t,g, or c

<400> 150

```

gcccacgcgt cgcccacgcg tycggaggct cgggtcggtg tggtagcgtg tcttcccgtc 60
tgcgtagggg acctgcccga ctcagtggcc gccatggcat cagatgaagg caaacttttt 120
gttggagggg tgagttttga caccaatgag cagtcgctgg agcaggtctt ctcaaagtac 180
ggacagatct ctgaagtggg ggttgtgaaa gacagggaga cccagagatc tcggggattt 240

```

```

gggtttgtca cctttgagaa cattgacgac gctaaggatg ccatgatggc catgaatggg 300
aagtctgtag atggacggca gatccgagta gaccaggcag gcaagtcgtc agacaaccga 360
tcccgtgggt accgtgggtg ctctgccggg ggccggggct tcttccgtgg gggccgagga 420
cggggccgtg ggttctctag aggaggaggg gaccgaggct atggggggaa ccggttcgag 480
tccaggagtg ggggctacgg aggctccaga gactactata gcagccggag tcagagtggg 540
ggctacagtg accggagctc gggcgggtcc tacagagaca gttacgacag ttacgctaca 600
cacaacgagt aaaaaccctt cctgctcaag atcgtccttc caatggctgt gtgtttaaag 660
attgtgggag cttcgctgaa cgtaaatgtg tagtaaattgc acctccttgt attcccactt 720
tcgtagtcat ttcggttctg atcttgtaaa acccagcctg accgcttctg acgccgggat 780
ggcctcgta ctagactttt ctttttaagg aagtgtgtgt tttttttgag ggttttcaaa 840
acattttgaa aagcatttac ttttttgacc acgagccatg agttttcaaa aaaatcgggg 900
gttgtgtggg tttttgggtt ttgttttagt ttttggttgc gttgcctttt tttttttagt 960
ggggttggcc ccatgaagtg ggtgccccac tcacttctct gagatcgaac ggactgtgaa 1020
tccgctcttt gtcggaagct gagcaagctg tggctttttt ccaactccgt gtgacgtttc 1080
tgagtgtagt gtgtaggac cccggcgggt gtggcagcaa ctgccctgga gccccagccc 1140
ctgctccat ctgtgctgtg cgtccacag tagacgtgca gacgtccctg agaggttctt 1200
gaagatgttt atttatattg tcctttttta ctggaagacg tacgcatact ccatcgtatg 1260
tgtatttgca gtggctgagg aattcttgta cgcagttttc tttggcttta cgaagccgat 1320
taaaagaccg tgtgaaatga accttgctct gacaattccc ttgcattgca ccacacactc 1380
cttgctgcgg gctcctgcag ccagacctga gcagagagag aagggtggaga agcagcgggt 1440
ctgcaagcct tccctggggc ctgcagagct agaaagggag gccagcaga ctggcgctgg 1500
tcagggtagg ggagccaggc gggggacggg agcgggcagc tcaggcctca gggcagccct 1560
ggggaggctt ctggcatggt ggccagaagg ctggactgtg cgggcaactt ancaaggaca 1620
tggactgcac tgacgtgact ggatgctcat ctagagcagn caagacaaag cactggcncc 1680
caggggactt cagaaggcaa cggttacta 1700

```

<210> 151

<211> 922

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (906)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (915)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (922)

<223> n equals a,t,g, or c

<400> 151

```

gcggaatcta caccttcccc gccagcggta caactgcaga actgcaggag actatctttc 60
tagacaaggc agttgaggag gagggagcgc ttgaggggga ctggcctggc gtgcactccg 120
cacctcgggg acattattgc gcgtggaacg gctgcttttg gaagactatt gcccagaaga 180
aaagatgttt ggttttcaca agccaaagat gtaccgaagt atagagggct gctgtatttg 240

```

```
cagagctaag tcctccagtt ctcgattcac tgacagtaaa cgctatgaaa aggacttcca 300
gagctgtttt ggattgcatg agactcgttc aggagacatc tgcaatgcct gtgtcctgct 360
tgtgaaaaga tggaagaagt tgccagcagg atcaaaaaaa aactggaatc atgtggtaga 420
tgcaagggct ggacccagtc taaagactac attgaaacca aagaaagtga aaactctatc 480
tggaacagc ataaaaagca accagatcag taaactgcag aaggaattta aacgtcataa 540
ttctgatgct cacagtacca cctcaagtgc ctccccagct caatctcctt gttacagtaa 600
ccagtcagat gacggctcag atacagagat ggcttctggt tctaacagaa caccagtttt 660
ttccttttta gatctcactt actggaaaag acagaagata tggtgtggga tcatctataa 720
aggccgtttt ggggaagtcc tcattgacac acatctcttc aagccttgct gcagcaataa 780
gaaagcagct gctgagaagc cagaggagca gggccagagc ctctgcccac ctccactcag 840
gagtgggtgac tgaggttttt atgtagaagg ggaacaaaaa aaaaaatatc tgaattttga 900
aaaccncaaa ggtanaaaat gn 922
```

<210> 152

<211> 635

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (13)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (594)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (614)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (616)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (628)

<223> n equals a,t,g, or c

<400> 152

```
cggacgcgtg gngtgacac gcagcccacg gtctgtactg acgcgccctc gcttcttctt 60
ctttctcgac tccatcttcg cggtagctgg gaccgccgtt cagtcgccaa tatgcagctc 120
tttctccgcg cccaggagct acacaccttc gaggtgaccg gccaggaaac ggtcgcccag 180
atcaaggctc atgtagcctc actggagggc attgccccgg aagatcaagt cgtgctcctg 240
gcaggcgcgc ccctggagga tgaggccact ctgggccagt gcggggtgga ggccctgact 300
accctggaag tagcaggccg catgcttgga ggtaaagtcc atggttccct ggcccgctgct 360
ggaaaagtga gaggtcagac tcctaagggtg gccaaacagg agaagaagaa gaagaagaca 420
```

```

ggtcgggcta agcggcggat gcagtacaac cggcgctttg tcaacgttgt gcccaccttt 480
ggcaagaaga agggccccc aa tgccaactct taagtctttt gtaattcttg ctttctctaa 540
taaaaaagcc acttagttca aaaaaaaaaa aaaaaamtcg gggggggccc gkancccaat 600
ttscctata gggngncgtt taaattcntt ggcgg 635

```

<210> 153

<211> 2328

<212> DNA

<213> Homo sapiens

<400> 153

```

acggcagtg cactcaccgc gctcgcgcgc ccccggcgc ccacgcgcgc gcgtcgttct 60
cccggccgct cgctccccgc cgctcacacc tgagctcact cgcgcacgcc cgcccgcccc 120
gagaaccgcg ccgcccgcctc ggccccgcgc aagccccgc gcgccatgtc ttcgcctccc 180
gaaggaaact agagactaaa gctggacacc cggccgcgct gaaagctggt ggaatgcgaa 240
ttgtgcagaa acaccacat acaggagaca ccaaagaaga gaaagacaag gatgaccagg 300
aatgggaaag cccagtgcca cctaaaccca ctgtgttcat ctctggggtc atcgcccggg 360
gtgacaaaga tttccccccg gcggctgcgc aggtggctca ccagaagccg catgcctcca 420
tggaacaaga tccttcccc aagaaccagc acatccagca gccacgcaag tragcctgga 480
gtccaccagc ctgccccatg gccccggctc tgctgcactt ggtatttccc tgacagagag 540
aaccagcagt ttcgccccaa tcctactctg ctgggaaatc taaggcaaaa ccaagtgtct 600
tgtcctttgc cttacatttc catattttaa actagaaaca gctccagccc aaaccttgtt 660
tatggggagt ctggttggtg gtcatttgag gatcattgtg cccctagagg tgccattagc 720
agaatttgcc aagatccgag aaaaatttta gctttagtct tatttcagca gtcacctgac 780
gtccttgtct atggtcttaa aaacaagaag gcacacattt gagaagatga gattaagggt 840
aggagaaaac ctacgtcatt gcatgctttt tagtatgggc caataaaatc tcaacacctg 900
tggaagagta agaactaagg gaatgagttt gggcgcccc tcataaagga ccttagaggg 960
agggaacagc aatgccaat ttcctctct cgtgagatgg gggatcctgt gcaggctgat 1020
gaggcaccca tgagaaaagc cgaaaaagca tgcattctag aaatagcccc tcaattccag 1080
gagtcaacat gccaaagaat gaggttgagg acaggtagct ccgagggagg acttctggca 1140
tgagatctcg gcacggcaag cccagcatcg cctcagcccc gacaggctcc accaggagat 1200
caagcaaggg ctgcctttca ggagtcacct cctgagccac ttcagagttc tggaagtgc 1260
cacggaccag ggtggaggaa tagacttcta gttcattctg ggacacttga gccagagagt 1320
tgaaagcttg gaaagaccag ataagaaacc tgccctttgt ctccctaggg acatgagaca 1380
ccacattcca tttgtgctag aaaaacctat ccactgatga gtctaactgt tccaaacgcc 1440
tcccacctgg tgtgcacagc tgccctgggtc cattgtcact tgggtgcac aggttgtcct 1500
ccgattttta gatgagtttc ctgtctagag atgtcctagt ctgctcactg gctggtggca 1560
gtagggtacc ctgcgtcctc gaaaagccag agggttcacc tagtcagacg aaactccaga 1620
acagtgttg tggaaggcct gactgtcctg ctcaccaca gccgatctgc tgcaggtcag 1680
caactgtgtc gtgagcagct gccaaaccac agcctttctg gtgctgttct ccagttcacg 1740
tctgccagct ggtgagggca gaggcagacc tggtcagacc cagcgcccc cctccctgag 1800
ggagcatggc acagcctcac acttgaaaga cgggtgttgg tttcccatct aatcaactta 1860
agggaagccg gcatgtaccc ttcaaggccc tgtcaccacc tatttcctga tcagttggta 1920
taaaactgag gtggctttta gagaccaga cttggttggc agcgctgcca tggaacaccc 1980
cagcaagcac ctcccagcct gcctttcgga gcagaccca ggaggggatg ccgcgctcca 2040
gcaacaccag gtcaggcctg tgcagacccc tgccctgccg ctgcagaaat ccagaagcat 2100
ccttaagtct tctcagttct cagccagagg gagggctgtt atttccagag gtgcgctttt 2160
tatgtacttt tagtagatg tggcatgcat cgtgagctt tagatcata aatccaaaa 2220
gtttgcctaa atgagtttat cagttgttaa cttcaagaat attaaatgat ttataataaa 2280
gctcctgcat ttctctccaa aaaaaaaaaa aaaaaaaaaa aaaaaaat 2328

```

<210> 154
<211> 1268
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (80)
<223> n equals a,t,g, or c

<400> 154
aattcggcag agcaggagg gagccagtgg tccctgcctg tccttcacag tgtccctgac 60
ccagcgtgcc tcacactggn cagggtcagc aaaggctctg ctgcagtcag gtcctctgtt 120
cctcgcgctg gcgggggtcag cagacgtctg gccgcagtga ggtccactgt tctctgcagg 180
gctgtgggct gcatactggc cgagctgctg gcgcacaggc ctcttctccc cggcacttcc 240
gagatccacc agatcgactt gatcgtgcag ctgctgggca cggccagtga gaacatctgg 300
ccgggctttt ccaagctgcc actggtcggc cagtacagcc tccggaagca gccctacaac 360
aacctgaagc acaagttccc atggctgtcg gaggccgggc tgcgctgctg cacttcctgt 420
tcatgtacga ccctaagaaa agggcgacgg ccggggactg cctggagagc tcctatttca 480
aggagaagcc cctaccctgt gagccggagc tcatgccgac ctttccccac caccgcaaca 540
agcgggccgc cccagccacc tccgaggggc agagcaagcg ctgtaaaccg tgacgggtggg 600
cctggcacac gcctgtattc ccacaccagg tcttcgatc agtgggtgtc gtgaagggtg 660
ccgcgagcca ggctgaccag gcgcccggga tccagctcat ccccttggct gggaacatcc 720
tccactgact tctcccact gtctgccctg aaccactgc tgccccaga aaaaggccgg 780
gtgacaccgg ggggtctcca gcccggtgcac cctggaaggg caggctctggc ggctccatcc 840
gtggctgcag ggggtctcat tggctcctct cgctatgttg gaaatgtgca accactgctt 900
cttgggagga gtgggtgggtg cagtcccccc gctgtctttg agttgtgggtg gacgctggcc 960
tgggatgaga gggcccagaa gaccttcgta tcccctctca gtcgcccggg gctgtcccg 1020
gcatgggttg gctgtgggga ccccagggtg gcctggcagg actccagatg aggacaagag 1080
ggacaaggta tggggtggga gccacaattg aggatacccc gagactacca ggagagccct 1140
gggctggagg ctgagctgca tccctgctcc ccacatggag gaccacaacag gagggcgtgg 1200
ctctgatgct gagcgaagct ataggctctt gttggataaa agctttttta asagaaaaaa 1260
aaaaaaaaa 1268

<210> 155
<211> 4299
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (2813)
<223> n equals a,t,g, or c

<400> 155
gtcagccctc gcgctggggg cgcaggaaac aatagaggcc gcgcgcacag agcgagctct 60
tgcagcctcc ccgcccctcc cgcaacgctc gaccccagga tcccccggc tcgcctgccc 120
gccatggccg acaagggaagc agccttcgac gacgcagtgg aagaacgagt gatcaacgag 180
gaatacaaaa tatggaaaaa gaacaccctt tttctttatg atttgggtgat gacccatgct 240
ctggagtggc ccagcctaac tgcccagtgg cttccagatg taaccagacc agaagggaaa 300
gatttcagca ttcctcgact tgtcctgggg acacacacat cggatgaaca aaaccatctt 360

```

gttatagcca gtgtgcagct ccctaataatgat gatgctcagtt ttgatgcgctc acactacgac 420
agtgaagaaag gagaattttgg aggtttttggt tcagtttagtg gaaaaattga aatagaaatc 480
aagatcaacc atgaaggaga agtaaacagg gcccgttata tgccccagaa cccttgtatc 540
atcgcaacaa agactccttc cagtgatgtt cttgtctttg actatacaaa acatccttct 600
aaaccagatc cttctggaga gtgcaaccca gacttgcgctc tccgtggaca tcagaaggaa 660
ggctatgggc tttcttggaa cccaaatctc agtgggcact tacttagtg ttcagatgac 720
cataccatct gcctgtggga catcagtgcc gttccaaagg agggaaaagt ggtagatgcg 780
aagaccatct ttacagggca tacggcagta gtagaagatg tttcctggca tctactccat 840
gagtctctgt ttgggtcagt tgctgatgat cagaaactta tgatttggga tactcgttca 900
aacaatactt ccaaaccaag ccactcagtt gatgctcaca ctgctgaagt gaactgcctt 960
tctttcaatc cttatagtga gttcattctt gccacaggat cagctgacaa gactgttgcc 1020
ttgtgggagt tgagaaatct gaaacttaag ttgcattcct ttgagtcaca taaggatgaa 1080
atatccagg ttacagtggt acctcacaat gagactatt tagcttccag tggtagtgat 1140
cgcagactga atgtctggga ttttaagtaaa attggagagg aacaatcccc agaagatgca 1200
gaagacgggc caccagagtt gttgtttatt catggtgggc atactgccaa gatattctgat 1260
ttctcctgga atcccaatga accttgggtg atttgttctg tatcagaaga caatatcatg 1320
caagtgtggc aaatggcaga gaacatttat aatgatgaag accctgaagg aagcgtggat 1380
ccagaaggac aagggtccta gatattgtct tacttgttgt gatttttagac tccccttttt 1440
tcttctcaac cctgagagtg atttaacact ggttttgaga cagactttat tcagctatcc 1500
ctctatataa taggtaccac cgataatgct attagcccaa accgtgggtg ttttctaaat 1560
attaataggg gggcttgatt caacaaagcc acagacttaa cgttgaaatt ttcttcagga 1620
atcttctagt aaccaggtc taaagtagct acagaaagg gaataattatg tgtgattatt 1680
tttcttctta tgctatatcc ccaagttttt cagactcatt taagtaaagg ctagagttag 1740
taaggaatag agccaaatga ggtaggtgtc tgagccatga agtataaata ctgaaagatg 1800
tcacttttat tcaggaaata gggggagatt caagtcgtat agattcctac tcgaaaatct 1860
tgacacctga ctttccagga tgcacatttt catacgtaga ccagtttctt cttggtttct 1920
tcagttaagt caaaacaaca cgttcctctt tccccatata ttcatatatt tttgctcgtt 1980
agtgtatttc ttgagctgtt ttcattgtgt ttatttctctg tctgtgaaat ggtgtttttt 2040
tttttgttgt tggttttttt tttttttttt taacttggga ccaccaagtt gtaaagatgt 2100
atgtttttac ctgacagtta taccacaggt agactgtcaa gttgagaaga gtgaatcaat 2160
aacttgtatt tgttttaaaa attaaattaa tcttggataa gagttgcttt ttttttttag 2220
gagttagtcc ttgaccacta gtttgatgcc atctccattt tgggtgacct gtttcaccag 2280
caggcctgtt actctccatg actaactgtg taagtgttta aaatggaata aattgctttt 2340
ctacataacc ccatgctgat gggttttatt tagtataaaa catccatcaa acaccagtct 2400
ctggcttcta gaagagtcct tcagatgaca gttgttgtcc atgggtcttg actatcaaga 2460
gcagaattaa atgtaatagt cccagagctg tagaaaagaa ctttactcct tcccaggga 2520
agtgaagac ataaaacact gaatcagagg tggcacagat tagtctttga taaggtaacg 2580
tttctttgaa gtctgtctgt agagaactac atggacttcc aagagtgtca aaggcagtg 2640
ggtagagaga atttaaggca agatttaaat ttggaaaagg tgcttgaacc ttttctcaga 2700
ggttttattt cccagtatg tttttcactg gggcctttac ttaggttaga aataataggc 2760
tttgaaggcc tctatcacca gatgcaataa ccagataaaa ttctgtttt ttncccaatc 2820
gcttagtttt tkgtkgttgt tgttttttaa ctgagtagat cattctgacc cagaactact 2880
ttcatgaggt aagatctttg ggaaaatctg aatagcgtta accattagat tcaaatctca 2940
aatggtttct tttcaagtct agttgtttta gagtatagtg agaaaatcct tgacacaatt 3000
ttaagagtaa actatatatc tcagcatatc cttgaacaaa aagtagactt tgtaaaagta 3060
ttcattttaa ttctaactc ctgggcacaa aagaatggaa attgtaaacc catgtaatgg 3120
aaattggcta tctttttgac cccacatgtg cccctcaaaa atgtttttgg tttgggtcaa 3180
cacaaggcaa gatacattct ttaaaatact cccagatgtg tccatacatt catcctttac 3240
tcagtgcata tgtgagggtt gttgctggaa gacaggaggc tcatctttcc tttccttgg 3300
gcattgagat cagtatcaac agcagatgaa atagaatcca gcaaagagtt gacatgttct 3360
gcctccggcc aactctagaa tctttttaag caggtcagcc agtatttgca acttccacag 3420

```

```
gatgaattgc ttgccaagtt tctggcactc ttgtctgggtt ggaagagtac atccaaaggg 3480
tacttagtga tcctttgcta agaagttttt tgctgtttcc gggttacaga twtggccata 3540
tattttctaaa cagcccttat aagtagagag ctcttcagca agactgagcc ttagctgttc 3600
catctctttg ttcttctgtt gctggagttg caccctattt mttactgcy tctgcgttct 3660
tccatttcct ccagctgttc ctgcatgaga tggccaagaa cttttctaata gagccaaaca 3720
ataaaaaactc acattgtcca ctcttactta taaaacactt ttttgttcat tgtttaatct 3780
tgatagcagt attgaggctg gtatttatat gataggttat gaaacagggtt caaagaagtt 3840
gtgtcttgga aaaaaagtga caatgctttt gaaaatgatg acgaaaaagg catcttgtct 3900
gttaaccaca gcttgcttta atagaatcct ggggagggtg attgggactt ttagtatta 3960
caaccttagt gtcattgagg aggatttttg tctagttagt gggctgagtt tcatatacct 4020
ctccctccat gtgcaggttt gttaagataa ttggtagttt ttaataatat aaaatactta 4080
agttgaaata caaaagtgtg gcamcaatta ttaaataattg gctagaattc taggagagtt 4140
acacaactag tggaagtcca tgtttagaaa ataaatggct tgtttaagga aaagtttttg 4200
tgtccaaagc tccttaaagt cagagagatt tctacctggt acttaacatc atatggaaat 4260
tgatgcttta gtgagggtgt tggctatcct attgtcaat 4299
```

<210> 156

<211> 1006

<212> DNA

<213> Homo sapiens

<400> 156

```
cacgcgtccg cccacgcgtc gaccacgcgc tccgccgaaa gcgaagaagg aagctcctgc 60
ccctcctaaa gctgaagcca aagcgaaggc tttaaaggcc aagaaggcag tgttgaaagg 120
tgtccacagc cacaaaaaga agaagatccg cagctcacc accttccggc ggccgaagac 180
actgcgactc cggagacagc ccaaataatcc tcggaagagc gctcccagga gaaacaagct 240
tgaccactat gctatcatca agtttccgct gaccactgag tctgccatga agaagataga 300
agacaacaac acacttggtg tcattgtgga tgttaaagcc aacaagcacc agattaaaca 360
ggctgtgaag aagctgtatg acattgatgt ggccaaggct aacaccctga ttcggcctga 420
tgagagagaag aaggcatatg ttcgactggc tcttgattac gatgctttgg atgttgccaa 480
caaaattggg atcatctaaa ctgagtccag ctgcctaatt ctgaatatat atatatatat 540
atcttttcac cataaaamat gcctgtctgt caatttctgg ttgggctggg aggccacaca 600
cacacactga catgacaggg cttgggcaag actcctgttc tacttatcct tttgaaatac 660
ctcaccctgc cactccacca tgtatgatca ttccagagat ctttgtgact agagttagtg 720
tcctaggaaa accagaactc agaacttgcc tccatgggtg agtaacaagc tgtacaagaa 780
ccccttttat ccctggaaga ggctgtgtat gaaaccaatg ccaggggtt gaagggtgtt 840
agcatccatt tcaggggagt gtggattggc tggctctctg gtagcatttt gtcctcacac 900
acccatctac tatgtccaac cggctctgtc gcttccctca ccccttgccc aataaaggac 960
aaggacttca aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 1006
```

<210> 157

<211> 1686

<212> DNA

<213> Homo sapiens

<400> 157

```
gctggctcac ctccgagcca cctctgctgc gcaccgcagc ctccggacct cagcccagga 60
tactttggga cttgccggcg ctccagaaac cgcccagacg gcccctccac cttttgtttg 120
cctagggtcg ccgagagcgc ccggaggga ccgcctggcc ttcggggacc accaattttg 180
tctggaacca ccctcccggc gtatcctact ccctgtgccg cgaggccatc gcttactgg 240
aggggtcgat ttgtgtgtag tttggtgaca agatttgcat tcacctggcc caaaccttt 300
```

```
ttgtctcttt ggggtgaccgg aaaactccac ctcaagtttt cttttgtggg gctgcccccc 360
aagtgtcgtt tgttttactg tagggctctc cgcccggcgc cccagtggtt ttctgagggc 420
ggaaatggcc aattcggggc tgcagttgct gggcttctcc atggccctgc tgggctgggt 480
gggtctgggt gcctgcaccg ccatcccga gtggcagatg agctcctatg cgggtgacaa 540
catcatcacg gcccaggcca tgtacaaggg gctgtggatg gactgcgtca cgcagagcac 600
ggggatgatg agctgcaaaa tgtacgactc ggtgctcgcc ctgtcccgcg ccttgacaggc 660
cactcgagcc ctaatgggtg tctccctggt gctgggcttc ctggccatgt ttgtggccac 720
gatgggcatg aagtgcacgc gctgtggggg agacgacaaa gtgaagaagg cccgtatagc 780
catgggtgga ggcataattt tcatcgtggc aggtcttgcc gccttggtag cttgctcctg 840
gtatggccat cagattgtca cagactttta taacccttg atccctacca acattaagta 900
agtctgggaa ccctgcctcc taaggggaca ggtctggggg cctggaatag ggaggagggc 960
agaggcacgc cagggtttct aaccaccccc ttctyttcac aggtatgagt ttggccctgc 1020
catcttttatt ggctgggcag ggtctgcctc agtcatcctg ggagggtcac tgctctcctg 1080
ttcctgtcct gggaatgaga gcaaggctgg gtaccgtgca ccccgctctt accctaagtc 1140
caactcttcc aaggagtatg tgtgacctgg gatctccttg ccccgacctg acaggctatg 1200
ggagtgtcta gtagcctgaa agggcctggg gctgagctca gcctgtgggc aggggtgccgg 1260
acaaaggcct cctggctact ctgtccctgc actccatgta tagtctctt gggttggggg 1320
tggggggggt ccgttgggtg gagagacaaa aagagggaga gtgtgctttt tgtacagtaa 1380
taaaaaataa gtattgggaa gcaggctttt ttcccttcag ggctctgct ttctcccggt 1440
ccagatcctt gcaggagct tggaacctta gtgcacctac ttcagttcag aacacttagc 1500
acccactga ctccactgac aattgactaa aagatgcagg tgctcgtatc tcgacattca 1560
ttcccacccc cctcttattt aaatagctac caaagtactt cttttttaat aaaaaataa 1620
agatttttat taggtaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1680
aaaaaa
```

<210> 158

<211> 4147

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (13)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (292)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (4145)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (4146)

<223> n equals a,t,g, or c

<400> 158


```

cggacgcgtg ggnccggcccc cctctctcgg cccggccatc ttgtgggaag agctgaagca 60
ggcgctcttg gctcggcgcg gcccgtgca atccgtggag gaacgcgccg ccgagccacc 120
atcatgcctg ggcacttaca ggaaggcttc ggctgcgtgg tcaccaaccg attcgaccag 180
ttatttgacg acgaatcgga ccccttcgag gtgctgaagg cagcagagaa caagaaaaaa 240
gaagccggcg gggggcgcggt tgggggccct gggggccaaga gcgcagctca gngccgcggc 300
ccagaccaac tccaacgcgg caggcaaaca gctgcgcaag gaggccaga aagaccgcaa 360
gaaccgcgtg ccccccagcg ttggcgtggt tgacaagaaa gaggagacgc agccgcccgt 420
ggcgcttaag aaagaaggaa taagacgagt tggagaaga cctgatcaac aacttcaggg 480
tgaagggaaa ataattgata gaagaccaga aaggcgacca cctcgtgaac gaagattcga 540
aaagccactt gaagaaaagg gtgaaggagg cgaattttca gttgatagac cgattattga 600
ccgacctatt cgaggctcgt gtggtcttgg aagaggtcga gggggccgtg gacgtggaat 660
ggccgagga gatgatttg attctcgtgg caaacgtgaa tttgataggc atagtggagg 720
tgatagatct tctttttcac attacagtgg cctgaagcac gaggacaaac gtggaggtag 780
cggatctcac aactgggaa ctgtcaaaga cgaattaaat gacttggatc aatcaaattg 840
gactgaggaa acacctgaag gtgaagaaca tcatccagtg gcagacactg aaaataaggaa 900
gaatgaagtt gaagaggtaa aagaggaggg tccaaaagag atgactttgg atgagtggaa 960
ggctattcaa aataaggacc gggcaaaagt agaatttaat atccgaaaac caaatgaagg 1020
tgctgatggg cagtggaaaga agggatttgt tcttcataaa tcaaagagtg aagaggctca 1080
tgctgaagat tcggttatgg accatcattt ccggaagcca gcaaatgata taacgtctca 1140
gctggagatc aattttggag accttggccg cccaggacgt ggcggcaggg gaggacgagg 1200
tgacgtggg cgtggtgggc gcccaaaccg tggcagcagg accgacaagt caagtgtctc 1260
tgctcctgat gtggatgacc cagaggcatt cccagctctg gcttaactgg atgccataag 1320
acaacctgg ttcctttgtg aacctttctg ttcaaagctt ttgcatgctt aaggattcca 1380
aacgactaag aaattaaaaa aaaaaagact gtcattcata ccattcacac ctaaagactg 1440
aattttatct gttttaaaaa tgaacttctc ccgctacaca gaagtaacaa atatggtagt 1500
cagttttgta tttagaaatg tattggtagc agggatgttt tcataatttt cagagattat 1560
gcattcttca tgaatacttt tgtattgctg cttgcaaata tgcatttcca aacttgaaat 1620
atagggtgta acagtgtgta ccagtttaaa gctttcactt catttgtgtt ttttaattaa 1680
ggatttagaa gttcccccac ttacaaactg gttttaaaata ttggacatac tggttttaat 1740
acctgctttg catattcaca catggtcaac tgggacatgt taaactttga tttgtcaaat 1800
tttatgctgt gtggaatact aactatatgt attttaactt agttttaata ttttcatttt 1860
tggggaaaaa tcttttttca cttctcatga tagctgttat atatatatgc taaatcttta 1920
tatacagaaa tatcagtact tgaacaaatt caaagcacat ttggtttatt aacccttgct 1980
ccttgcatgg ctcattaggt tcaaattata actgatttac attttcagct atatttactt 2040
tttaaagtgt tgagtttccc attttaaaat ctaaactaga catcttaatt ggtgaaagt 2100
gtttaaacta cttattgttg taggcacat cgtgtcaagt gaagtagttt tataggtagt 2160
ggttttttct ccccttcac cagggtgggt ggaataagtt gatttggcca atgtgtaata 2220
tttaaactgt tctgtaaaat aagtgtctgg ccat ttggta tgatttctgt gtgtgaaagg 2280
tcccaaaatc aaaatggtac atccataatc agccaccatt taacccttcc ttgttctaaa 2340
acaaaaacca aagggcgctg gttggtaggg tgagggtggg gagtatttta atttttggaa 2400
tttgggaagc agacagctt actttgtaag gttggaacag cagcactata catgaaatat 2460
aaacaaaaaa cctttactgt ttctaaattt cctagattgc tattatttgg ttgtaagttg 2520
agtattccac agaaagtgg aattatctct tctctcttcc tccattagaa aattaggtaa 2580
ataatggatt cctataatgg gagcatcacc acttattaaa acacacatag aatgatgaat 2640
taaaaaagtt ttctaggatt gtcttttatt ctgccacatt tattgataaa cagtgaagga 2700
atttttaaaa aatttttaag aattgtttgt cagctcattt ttgaaaatgt tctacctgta 2760
tatggtaatg tccagtttta aaaatattgg acatcttcaa tcttaaacat ttctatttag 2820
ctgattggtt ctcacatata cttctaaaaa aaacttttat gttataagag ttactttttg 2880
gataagattt attaatctca gttacctact attctgacat tttaggaagg aggtaatgtg 2940
ttttaatgat ggataaactt gtgctggtgt tttggatctt atgatgctga gcatgttctg 3000
cactggtgct aatgtctaata ataattttat atttacacac atacgtgcta cccagagatt 3060

```

```

aatttagtcc atatgaacta ttgacccatt gttcattgag acagcaacat acgcactcct 3120
aaatcagtgt gtttagactt ttcaagtatc taactcattt ccaaacatgt accatgtttt 3180
ataaacctct tgatttccag caacatacta tagaaaacac ctgctactca aaacacaact 3240
tctcagtgtc atccattgct gtcgtgagag acaacatagc aatatctggt atgttgcaag 3300
ctttcaagat agcctgaact taaaaagttg gtgcattagt tgtatctgat ggatataaat 3360
ttgcctccta gttcactttg tgtcaagagc taaaactgtg aacctaactt tctcttattg 3420
gtgggtaata actgaaaata aagattttatt ttcattgctca cttcttaaaa gtcataaaaa 3480
caatcaaata ggatcatgtt tattgtcatg tgtttcctgg kttctgacct gtgtgcacac 3540
ccctgtgtgt ttataatttt taaattgaat tttatatggg gtttttattt gctaaaaacc 3600
aggctgttga atcacatttg ggaagggtac ttatcttaat gactaatgac ttaattggga 3660
aagttgaatt cttgtaaaat acaaaatcca aggacttctt ggatttaatc taattgtcac 3720
ttcttagcag atcacttttt tgataatgaa agttaagcat actgaatgct acttttgatt 3780
gacaaactgg ctataatagt ctaggggaaa aatccctaaa cagataaaga ttcctaaagt 3840
aatgggtggc gctgatgttt cagtgaactt ttatcttgat gcgtttaaat ggaagtaatg 3900
ccagacctga gatttttaag gcattttttac agcttgtatt gaaatgattg gagacatggg 3960
ttctttatta gctattttga gacctgtgga gttaagcaag acttttataaa attggcacca 4020
tatacatcta gttagtctct ttactcttat ttttttaaat aaaagtagta cacatcaaaa 4080
aaaaaaaaaa aaaaaaaaaa actcgagggg gggcccgkac ccaatcgccc tatgagtgat 4140
cgtanna 4147

```

<210> 159

<211> 1242

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1235)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1236)

<223> n equals a,t,g, or c

<400> 159

```

agcattttac ggcaagggtc tgacttatga gtgtgggtcag aggttttagc gaggcggctg 60
cgcagtacaa cccggagccc ccgccccac gcacacatta ctccaacatt gaggccaacg 120
agagtgagga ggtccggcag ttccggagac tctttgcccc gctggctgga gatgacatgg 180
aggtcagcgc cacagaactc atgaacattc tcaataaggt tgtgacacga caccctgac 240
tgaagactga tggttttggc attgacacat gtcgcagcat ggtggccgtg atggatagcg 300
acaccacagg caagctgggc tttgaggaat tcaagtactt gtggaacaac atcaaaaggt 360
ggcaggccat atacaaacag ttcgacactg accgatcagg gaccatttgc agtagtgaac 420
tcccagggtc ctttgaggga gcagggttcc acctgaatga gcatctctat aacatgatca 480
tccgacgcta ctcatatgaa agtgggaaca tggattttga caacttcac agctgctttg 540
tcaggctgga cgccatgttc cgtgccttca aatctcttga caaagatggc actggacaaa 600
tccagggtga catccaggag tggctgcagc tgactatgta ttcttgaaact ggagccccag 660
acccgcccc taccgcctt gctataggag tcacctggag cctcgggtct tcccaggggc 720
gatcctgtct gcagtcacat ctttgtgggg cctgctgacc cacaagcttt tgttctctca 780
gtacttgtaa ccagcttct caacatccag ggcccaattt gccctgcctg gagttcccc 840
tggtcttagg acactctaac aagctctgtc cacgggtctc cccattccca ccaggccctg 900

```

```

cacacaccca ctccgtaacc tctcccctgt acctgtgcca agcctagcac ttgtgatgcc 960
tccatgcccc gagggccctc tctcagttct gggaggatga ctccagtccc tgcacgccct 1020
ggcacaccct tcacggttgc taccagggcg gccaaagtcc agaccgtgcc agaccaggt 1080
gccccagtg ctttgtctat attctgtctc cagcctgcca ggcccaggag gaaataaaca 1140
tgccccagtt gctgatctct aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1200
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaanngggg gg 1242

```

<210> 160

<211> 2229

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (29)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (43)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (55)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (59)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (128)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (301)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2226)

<223> n equals a,t,g, or c

<400> 160

```

tcaccttctt gggcccaagc catccttcnt gctttcacct tcntcagaag ctggnattnc 60
aggcatgcat gcccatgcct ggctactttt taaatttttt gtgacacaag gtctcaccag 120
gttgccnag gctggtttcg gattcctggg ctcaagtgat cttcccacct aggtttccca 180

```

```

gagtgttgga attacaggcg tgagccatca catctggcct gtttatgggt agttaattca 240
ttccagactc tcagcctgaa amcactgaga atgtttgcat gctagttttc cacatcatat 300
ncaatattat taaaatactc attttgaata gaattccata tgggttaacc agagtactgt 360
tgggatgggt gtggctatct gcacgtagca gatttcctgc ttttattcaa agmcaatatt 420
actggatttt aaaatctgct tttamcatta tttttccttt tcactatmca taggtctatg 480
aaaattatcc tacttatgat ttaactgaaa gaaaagattt cataaaaaaca actgtaaaag 540
agctaatttc ttgagataga ggacagagaa gatgactcgt tcccatagat ttgaagatct 600
gatttatacc attataccag caaagagaaat gtatttcctt ttctaaatcc ttgttaagca 660
acgttagtag aacttactgc tgaccttttt atcttgagtg ttatgtgaat ttgagtttgc 720
tgttttaaat tgcatttcta tgccattttt agtttaaaat cttgcatggc attaatgtt 780
ccttgctttt atagttgtat tttgtacatt ttggatttct ttatataagg tcatagattc 840
ttgagctggt gtggttttta gtgcacttaa tattagcttg cttaaggcat acttttaatc 900
aagtagaaca aaaactatta tcaccaggat ttatacatag agagattgta gtatttagta 960
tatgaaatat tttgaatata catctctgtc agtgtgaaaa ttcagcggca gtgtgtccat 1020
catattaaaa atatacaagc tacagttgtc cagatcactg aattggaaact tttctcctgc 1080
atgtgtatat atgtcaaatt gtcagcatga caaaagtgc agatgttatt ttgtatttt 1140
taaaaaacaa ttggttgtat ataaagtttt tttatttctt ttgtgcagat cactttttta 1200
actcacatag gtatgtatct ttatagttgt agactatgga atgtcagtgt tcagccaaac 1260
agtatgatgg aacagtgaaa gtcaattcag tgatggcaac actgaaggaa cagttaccct 1320
gctttgcctc gaaagtgtca tcaatttgta attttagtat taactctgta aaagtgtctg 1380
taggtacgtt ttatattata taaggacaga caaaaaatca acctatcaaa gcttcaaaaa 1440
ctttgggaaa ggggtgggatt aagtacaagc acatttggtt tacagtaaat gaactgattt 1500
ttattaactg cttttgcccc tataaaatgc tgatattttac tggaaaccta gccagcttca 1560
cgattatgac taaagtacca gattataatg ccagaatata atgtgcaggc aatcgtggat 1620
gtctctgaca aagtgtgtct caaaaataat atacttttac attaaagaaa tttaatgttt 1680
ctctggagtt ggggctcttg gctttcagag tttgggttaat cagtgttgat tctagatgat 1740
caacataatg gaccactcct gaatgagact taattttgtc tttcaaattt actgtcttaa 1800
atcagtttat taaatctgaa ttttaaaaca tgctgtttat gacacaatga cacatttggt 1860
gcaccaatta agtgttgaaa aatatctttg catcatagaa cagaaatata taaaaatata 1920
tgttgaatgt taacagggtat tttcacagg tttgttcttg atagttactc agacactagg 1980
gaaaggtaaa tacaagtga caaaataagc aactaaatga gacctaataa ttggccttcg 2040
attttaaata tttgttctta taaaccttgt caataaaaaat aaatctaaat cactgggtgt 2100
ttaaaaaaaa aaaaaaaaaa aaaagggcgg ccgctctaga ggatccctcg aggggccccaa 2160
gcttacgcgt gcatgcgacg tcatagctct ctccctatag tgagtcgtat taataggagt 2220
ccaaantgg 2229

```

<210> 161

<211> 1920

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (43)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (119)

<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1755)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1766)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1832)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1841)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1915)
<223> n equals a,t,g, or c

<400> 161
cagacgtcct gcaggcggct ggcgagtgagg agcctgctgc ganccctga agaggaggca 60
gatgccgacc tggccgagg gccccctccc tggacacctg cgctcccctc aagtgaggng 120
accgtgaccg acatcaccgc caactccatc accgtcacct tccgcgaggc ccaggcagct 180
gagggttct tccgagaccg cagtgggaag ttctgaatca ccgtttttac tcttcttaa 240
ctgttttctt ttgggcttg ggtgggactt ccagagatag ggatgggttg ggggcgggg 300
aattatttta tttaaaaaaa taccgagcag caaaagggga gaagatcca ctactctccc 360
accacctgcc ctttctctga gggacgttta ccacgaggcc tcaggctggg gatggagaga 420
gttgctctgg gagttgggg accaccccca gggcaggatg gggacaggat cacctgccc 480
ggacaccacc attatcattc tcctctagt acgcagcagc tggttctggg agttaaagg 540
gcattggaag gcccaaacc tctcccttga gtggccaccc cagcctggtt ggctggttt 600
ccccttttct cttgtttcaa ttgggtctt accttgaact ctctctctg gctttgcgg 660
gggctgtgga ggctggttt raccaaaagt gagtggggcg ggaggaagg gaggaggaa 720
gggttgagg tacttggggc gaggcccttc cccttcagag aggttctat ccttcccagg 780
gaggaggcgc cgctgagacc cttctgctga gagctctgcc ctcccctcat cacctggcct 840
gtgcagaaac gctcatgcac acctggctgc acagggtgtc acgcattacc cttcgcgtgt 900
acgttcccat gtgcccgtg aaagcatgtg tggctgcaga cgtgtccaca tgggccttgc 960
gaacctgggt tagaaacct ggccaggcga acgtgggggt attcacagca caaaagacct 1020
caccaccaca cctgcactca cccacettg catgcacct gctacctgt tgcggctttc 1080
agyggagggc aggggtctg cacaggtgc atggcaccac atgctccagg catacagatg 1140
tggtttctcg gctgcaccg gccaggctgc ggggtgtcag gcgtctgcta agttgtgtga 1200
tgtatcagca caggcttga gacgtctgga ccctgtcctt cctcccgtga ggggttctt 1260
ttctttctga ctcaggtgac tttcagccc ttccaattcc cctctttttc tgsccctccc 1320
tccaactcag ccaaccagg ygtgggcagt cagggaggga gggagtgtc caccagttc 1380
tcagggcagc ccttgactcc taagccctt cctccttcca ttctgcatcc cctcccctc 1440
caacctaaat gccacagctg gggctragct gtattcctgt ggagggacct stgccgtgcc 1500

tctytgaggt caggctgtgc tgtgtgaatg ggcaggcttt gccccagccc acccctggca 1560
 aggtgcactt gttttctggg ttgtacaagg tgtcctgggg gcccgtggct tccctgccag 1620
 tgaggagtga cttctccctc tcttccagtc ctgtagggga gacaaaacca gattgggggg 1680
 cccaagggga gcatggaaaa ggccggctcc cctgtctttc cttggctgtc agagtcaggg 1740
 taacacacac caaantggag tgcggncarc aagtttgara cctgcccgcc ctccctgcag 1800
 ctctgctctg tgtcctcagg aaattcacag antctactga ngcaagaaaa gggtgaatcc 1860
 ttcccccaa ttcctctcct cccctggttt ccccaaaacc aaaaaaaagc ctgcnacccc 1920

<210> 162

<211> 2619

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (2546)

<223> n equals a,t,g, or c

<400> 162

ctgagagggg cgcgtgccgc ggagccaggc ttactacgtg acccggacac caggcatacg 60
 ctaggggcag tcagctgtgc cttctctttc ggagttgttc cgtgctccca cgtgcttccc 120
 cttctccact ggctgggatc ccccgggctc ggggcgcagt aataattttt caccatgcat 180
 cggaaaaagg tggataaccg aatccggatt ctcatgaga atggagtagc tgagcggcaa 240
 agatctctct ttgtttagt tggggatcga ggaaaagatc aggtggtaat acttcatcac 300
 atgttatcca aagcaactgt gaaggctcgg ccttcagtgc tgtggtgtta taagaaagag 360
 ctgggggttta gcagtcaccg gaagaaaaga atgcgacagc tgcagaagaa aataaagaat 420
 ggaacactga acataaagca ggacgacccc tttgaactct tcatagcagc cacaacatt 480
 cgctactgct actacaacga gaccacaaag atcctgggca ataccttcgg catgtgtgtg 540
 ctgcaggatt ttgaagcctt aactccaaac ttgctggcca ggactgtaga aacagtggaa 600
 gtggtgggct agtggtcac ctcctacgga ccatgaactc actcaagcaa ttgtacacag 660
 tgactatgga tgtgcattcc aggtacagaa ctgaggccca tcaggatgtg gtgggaagat 720
 ttaatgaaag gtttatctg tctctggcct cttgtaagaa gtgtctcgtc attgatgacc 780
 agctcaacat cctgcccac tccctccacg ttgccacat ggaggccctg cctccccaga 840
 ctccggatga gagtcttggt ccttctgata tggagctgag ggagttgaag gagagcttgc 900
 aggacaccca gcctgtgggt gtgttgggtg actgctgtaa gactctagac caggccaaag 960
 ctgtcttgaa atttatcgag ggcattctctg aaaagaccct gaggagtact gttgcactcc 1020
 agctgctcga ggacggggaa aatctgcagc cctgggattg gcgattgctg gggcgggtgc 1080
 atttgggtac tccaatatct ttgttacctc cccaagccct gataacctcc atactctgtt 1140
 tgaatttgta tttaaaggat ttgatgctct gcaatatcag gaacatctgg attatgagat 1200
 tatccagtct ctaaatacctg aatttaacaa agcagtgatc agagtgaatg tatttcgaga 1260
 acacaggcag actattcagt atatacatcc tgcagatgct gtgaagctgg gccaggctga 1320
 actagttgtg attgatgaag ctgcccacat cccctcccc ttggtgaaga gcctacttgg 1380
 cccctacctt gttttcatgg catccaccat caatggctat gagggcactg gccggtcact 1440
 gtccctcaag ctaattcagc agctccgtca acagagcgcc cagagccagg tcagaccac 1500
 tgcctgagaat aagaccacga cgacagccag attggcatca gcgcggacac tgcattgagt 1560
 ttccctccag gagtcaatcc gatacgcgcc tggggatgca gtggagaagt ggctgaatga 1620
 cttgctgtgc ctggattgcc tcaacatcac tcggatagtc tcaggctgcc ccttgctga 1680
 agcttgatga ctgactatg ttaatataga taccctcttt tgctaccaca aggcctctga 1740
 agttktcctc caacggctta tggccctcta cgtggcttct cactacaaga actctcccaa 1800
 tgatctccag atgctctccg atgcacctgc tcaccatctc ttctgccttc tgccctctgt 1860
 gccccccacc cagaatgccc ttccagaagt gcttgctgtt atccaggtgt gccttgaagg 1920

```

ggagatttct cgccagtcca tcttgaacag tctgtctcga ggcaagaagg cttcagggga 1980
cctgattcca tggacagtgt cagaacagtt ccaagatcca gactttgggtg gtctgtctgg 2040
tggaaggggtc gttcgcattg ctgttcaccc agattatcaa gggatgggct atggcagccg 2100
tgctctgcag ctgctgcaga tgtactatga aggcagggtt ccttgtctgg aggaaaagg 2160
ccttgagaca ccacaggaaa ttcacaccgt aagcagcgag gctgtcagct tgttggaaga 2220
ggtcatcact ccccggaagg acctgcctcc ttactcctc aaattgaatg agaggcctgc 2280
cgaacgcctg gattacctgg gtgtttccta tggcttgacc cccaggctcc tcaagttctg 2340
gaaacgagct ggatttggtc ctgtttatct gagacagacc ccgaatgacc tgaccggaga 2400
gcactcgtgc atcatgctga agacgctcac tgatgaggat gaggctgacc agggaggctg 2460
gcttgacgcy ttctggaag atttccgacg gcggttccta gccttgctct cctaccagtt 2520
cagtaccttc tctccttccc tggctntgaa catcattcag aacaggaaca tggggaagcc 2580
agcccagcct gccctgagcc gggaggagct ggaagcact 2619

```

<210> 163

<211> 1419

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (230)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (624)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (697)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1187)

<223> n equals a,t,g, or c

<400> 163

```

gatgcagctg acaccattga aactgacact gccactgctg acaccactgt tgccaacaac 60
gtaccccccg ccgccaccag cctcattgac ctatggcctg gcaacgggga aggggcctcc 120
acactccagg gtgagccag ggccccacg ccaccctcgg gtactgaggt caccctggca 180
gagggtgccc tgctggatga ggtggctccg gagccactgc tgccagcagn cgaaggctgt 240
gccacccttc tcaactttga tgagctgcct gagccgccag ccaccttctg tgaccagag 300
gaagtgggaag gggagccctt ggctgcccc cagaccccaa ctytgccctc agcccttgag 360
gagctggagc aagagcagga gccggagccc cacctgctaa ccaatggcga gaccaccag 420
aaggagggga cccaggccag tgaggggtac ttcagtcaat cacaggagga ggagtgtgcc 480
caatcggaag agctctgtgc caaggctccg cctcctgtgt tctacaacaa gcctccagag 540
atcgacatca catgctggga tgcagacca gttccagaag aggaggaggg cttcgagggt 600
ggtgattagc ggtggcgcca gccntaggct acccttgcca aggccgcca cctgcatcag 660
cctctggcca gacggcccg cgtgcctgca ttcgcancag ctccgcctgg caccactcc 720

```

```
ggattccggc cctggctggg gacttggccg cttccctacc cacagggcct gacttttaca 780
gcttttctct ttttttaaaa agttgatagg agacttgtag agttgactgg ctttcctctc 840
gttggtagtt gagacgctgt tgcaaatcc acccctcctt ccctgggtcca gattgtagct 900
cttagtcctc cctgctcagc tggccgggtt ggaggcctca ccctgcttgg ggcctggcgt 960
ggggggagct ctggtgggaa aatgtccccc acctcttttc ctagttttat gtttcttggg 1020
aaaatatcac tttgtattct ctgtccaggg cttcagatat tttgcacgaa ttttaaaaca 1080
tggcaataaa tggctcgtgg gctctggctc cctgggaccc cctccccgcc cttcttttga 1140
ccccttcctg tctggcccaa aggaagtagc aggccagct ggggccnctc ggctaccccc 1200
cgtctcctgc cgggcagttc ccaggttgga ggccctaggc gcggttcagg tcagggetat 1260
ggatggggcc caggggcttt ggtggccctt ccccaactcc ttcctctttg cttgggttcc 1320
tttttcacgt ttagtaactg tttttttttt tttttggaaa gcacaaactt ctgtaacggg 1380
tcgtgctcat gtctgttaat aaagaaatcc agatccagg 1419
```

<210> 164

<211> 3810

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (189)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2523)

<223> n equals a,t,g, or c

<400> 164

```
aattttcatg atctttgtat atttatatat atatattttw aaattttgca tttracttaa 60
agtgccatga gaaaatttgc atactgcaag gtggtcctag ccacctcctt gatttgggta 120
ctcttgata tgttcctgct gctttacttc agtgaatgca acaaatgtga tgaaaaaag 180
gagagaggnc ttctgctgg agatgttcta gagccagtag aaaagcctca tgaaggctcct 240
ggagaaatgg ggaaaccagt cgtcattcct aaagaggatc aagaaaagat gaaagagatg 300
tttaaaatca atcagttcaa tttaatggca agtgagatga ttgcactcaa cagatcttta 360
ccagatgtta ggtagaagg gtgtaaaaca aagggtgtatc cagataatct tcctacaaca 420
agtgtggtga ttgttttcca caatgaggct tggagcacac ttctgcgaac tgtccatagt 480
gtcattaatc gctcaccaag acacatgata gaagaaattg ttctagtaga tgatgccagt 540
gaaagagact ttttgaaaag gccttttagag agttatgtga aaaaactaaa agtaccagtt 600
catgtaattc gaatggaaca acgttctgga ttgatcagag ctagattaaa aggagctgct 660
gtgtctaaag gccaaagtat caccttcctg gatgccatt gtgagtgtac agtgggatgg 720
ctggagcctc tcttgccag gatcaaact gacaggagaa cagtgggtgtg tcccatcatc 780
gatgtgatca gtgatgatac ttttgagtac atggcaggct ctgatatgac ctatggtggg 840
ttcaactgga agctcaattt tcgctggtat cctgttcccc aaagagaaat ggacagaagg 900
aaaggtgatc ggactcttcc tgtcaggaca cctaccatgg caggaggcct tttttcaata 960
gacagagatt aatttcagga aattggaaca tatgtgctg gaattgatat ttggggagga 1020
gaaaacctag aaatttcctt taggatttgg cagtgtggag gaactttgga aattgttaca 1080
tgetcacatg ttggacatgt gtttcgaaa gctacacctt acacgtttcc aggaggcaca 1140
gggcagatta tcaataaaaa taacagacga cttgcagaag tgtggatgga tgaattcaag 1200
aatttcttct atataatttc tccagggtgtt acaaaggtag attatggaga tatatcgtca 1260
agagttggtc taagacacaa actacaatgc aaaccttttt cctggtacct agagaatata 1320
```


tatcctgatt ctcaaattcc acgtcactat ttctcattgg gagagatacg aaatgtggaa 1380
acgaatcagt gtctagataa catggctaga aaagagaatg aaaaagtgg aatttttaaat 1440
tgccatggta tggggggtaa tcaggttttc tcttatactg ccaacaaaga aattagaaca 1500
gatgaccttt gcttgatgt ttccaaactt aatggcccag ttacaatgct caaatgccac 1560
cacctaaaag gcaaccaact ctgggagtat gaccagtgta aattaaccct gcagcatgtg 1620
aacagtaatc agtgcctgga taaagccaca gaagaggata gccaggtgcc cagcattaga 1680
gactgcaatg gaagtcggtc ccagcagtggt cttcttcgaa acgtcacccct gccagaaata 1740
ttctgagacc aaattttacaa aaaaacgaaa aaaataagga ttgactgggc tacctcagca 1800
tacattttctg ccacattctt aagtagcaaa aaaggaaaag tgctttcctc ctctgcagga 1860
tgtaagggttt atcagccatt aaaacttaga cttctctagc ttttcaactag ctgtgaacca 1920
gccttcctgt ccatggacgt gaaactgcat agtaatgaga ctgtgcacac tgatgtttac 1980
aagattgaaa gagtctttct ccgaaaatca tggtaaagaa tactgagaca atgaaaaaaa 2040
atcaacaaaa tatgctttct ggagaactgt accttttatg gtttgcttgc acatcagtag 2100
ttctgctga acgtgctgtc ataataagaa gatttccaag attttttttc ctgattagaa 2160
ctggtagcca gtatattaaa tattgatata aaaataaaaag aactggaacc agattcagaa 2220
tcatgaaaac aacattttta caacaacaaa aaaactatat taaacagggt ttaaaggaaa 2280
ttaaaacaga actatgagaa gtacaatttg ttatagtata gtatcaaatt tctatagaa 2340
ttttatacct cagtggggaa aaataactga ttccaatgac attcattttg ttttcatctg 2400
tgatagtcac ggatgctttt attttccttg ggggtgctgaa attgagctga aaaaaaagg 2460
ctctttgaat atagttttta tttctctcta cagttttttt tgtttggttt gtgggctgtt 2520
ggnaattgta atttttaatt gccttctaaa aaatggaaat ttaacaatgt ctgatctcag 2580
ctgaacaaat tagatgtttc agttgctctt ggggtcaactg gcttacagat ttacatgtgc 2640
acacacacac aaatttctta tcacattttc gacttcttca cttgacctaa ctgattatgc 2700
gaaataccca agattcatgc tactgtacca cagatttggt ttcacagcaa taaatcttca 2760
gttctttgtt tatgattcca cttaacaaaa ggctgcaga agtgatttat tatttgggta 2820
tttgagata atacatttga tgggtttttg gaaaaccttt ttcaactccat actcagatat 2880
gcttcattgt caaatgcata tttagattag attattgaat tgtaatgttt atctgctgct 2940
ttttttaaat aaaatttgac tgaaaatgtt taattggcat tttttaatga cttagccaaa 3000
gaagtgcagc tattattcca tattaatagg cttgcatttc ttttcctaaa tcttatttag 3060
gctaaatcag ttttattttt ctctgatttt ttttaatacc acagaatcac ctgagtgtca 3120
attgaaagt gtcaattaaa aggtaacctt ttaatctcgt aggaggaatc tcattaagac 3180
atttttcctg atatgtagag cagtctgttg gcaaaaatgc atatattttc tttcatattt 3240
gtaaaattat atttaatgga attcctttct ttgattatca aggactttca ctgcaggcag 3300
tgctatttct tgtgcctaag aatgtttcca aaagtcgcat cgctaagat atttgccaag 3360
ttgagtgtac acaaagtttc tcatatcctg ttcaagttaa tcaacatcaa gcactgggg 3420
atgctttagg gtgagtcctat agtacaaaat gcataaacca tgtccccagg aaatttgaaa 3480
ggaagcaggt gctgaatgga atttttttcc ttttccatga gctgtgttaa ttctatctcc 3540
agtaggccta atgcttgaat aagcaagatg tctaataaat aaattatttt catgctcaga 3600
atttcagggt tttgtactcc agcatagctt ggtcttattt cttactgtat gaaagcttaa 3660
cagcaatgtg atttaagggt ttgttttaaa tgggagatgt aagtgattta attcatgggt 3720
acttttagaa cctgatagat aatcccattg cctttatttt tctaattaaa gaattcctaa 3780
atactttgaa aatacaaaaat attcctgaaa 3810

<210> 165

<211> 817

<212> DNA

<213> Homo sapiens

<400> 165

acagctgtga gccactgcgt ccagccctaa gatgattcat acctatcggg gaaaacagtg 60
ccactggaga gaacaggctg gcctctgcac tctggattgg tgacaggagt tatccaggcc 120

```
tgtctgaagg caatagcagg cctcccatcc ctggaccgcc ttatgtggcc tcccctgacc 180
tctgggtccca ctgggaagac tcagccctgc cccacccaag cctgaggcct gtgcagccca 240
cctgggagggg ctccctcagag gcaggcctgg actgggctgg ggccagcttc tccccagggg 300
ctccratgtg ggcggccttg gatgagcaga tgctgcagga gggcatccag gcmtcgcttc 360
ttgacggggc agcccaggaa ccccagagcg caccatggct gtccaagtcc tctgtctcct 420
ctctgcggct gcagcagctg gagcgcatgg gcttccctac ggagcaggcg gtggtggcac 480
tggcagccac aggccgtgtg gaggtgcccg tgctactgtt ggttggagga caagtgggca 540
ctgagaccct ggtgacccat ggaaagggtg ggccctgcca ctccgagggt cctgggcctc 600
cctagcccag gcagagagtg gggcacaggc aggcccttgg gtgctaaggg ctgggctgca 660
tgtgggtagc ccgagctcct actctgtcta aagagggccca cagtggggag caggggcacc 720
tctggaggca ggagaggccc cccagcatgc tgccctagta cgtgtttaga ataaaaacca 780
gtttgttttt caacctggac ctcccttgaa aaaaaaa 817
```

<210> 166

<211> 1578

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (16)

<223> n equals a,t,g,.or c

<220>

<221> misc feature

<222> (38)

<223> n equals a,t,g, or c

<400> 166

```
aggcagaagt cttctnttct ctggcctcac cccctcanc gccatagagc tgggcctggc 60
cttgctggga atggaggcat ccttccaaac ctgggggacg ggggtggggg gtggtwgtgg 120
tgggagggaa accatgtctt gctaaacctg tttctggtgc ctcccatccc cagacccacc 180
agacaccaca cagcagacaa tacacacca ctcgcacaag cttccatcca catgtgttgt 240
actttcagct ctaggcctgc agacaacccc acacggccac accaccacat gcccagtgt 300
acacacacag agccacaccg tccctctggg cctgctggct cctcccttgg ctttcccttg 360
gcccacttcc agggcccagg tgctgcaact aaatgtgaaa gctcagtggc cgctccttct 420
ttcagcccat caaccagcat tgggtccata gggaagcaca ggggactcac cctctttcat 480
atcccttgcc ctgcccgtgaa atggacaatc actttttggg ataggttgaa atttttaaag 540
agcctgcata attcggttcc ctcaaaggga agcccttgcc agtgggggtt tgaaagagaa 600
tttttggaac caacattcaa attctgcctc atctggaggg aaacccaaat tgggaggggg 660
aagaggaccc ctgatgtttt gctgcttcca gagatattag aaactgactc acttgattgg 720
aaaatggaca aaagtgcctt gacgtggagg gtgggcacca gatggggacc agccttgcca 780
actgctgctg tggcctccag cttggctggg tttgcaggcc gccagcagga aggcgaaggt 840
ggtagtacag caagaggcac tggcggggca gcaggcctgc aggaagctgtt tttccattgc 900
taggcctgac ccctctctac ctgtgagcgt tcagggggtc cctgagatag tttagatgcc 960
ccccactctt agacctcagc tcccacagtg ccttttaagg gggacctcac ctctgtgca 1020
cagccacccc actttcctct gcttcccttg cacascccag gcatagacga gctggcggtt 1080
gacccagttc ttcccccttt tcagccccac agctgctgcc acagggggcca actagggcca 1140
ggtggaaggg gagctgagaa gccaaaccct agcccagggg tgctgtggga actgggattc 1200
aatttgtagc ttcctgcctg gcttcagaga gcccagcaac cttctaggcc tgctttccag 1260
acttctgaga tagcctggga tgagcaatcc tgttacagta catctggacc ttccctacct 1320
```

gggctctggg gaggtctgtg gcctggagag ggaaaaggag ggaggggggtg tctgcaccac 1380
ctgggaagat agcacaaggc ctaatgaggt caccctgact cccaccccca gcatttcatt 1440
cataccagat aatagctgca ttactgccaa ctgaccttat aaccctctgc accttcaaaa 1500
agattcatgg tttttaattg ctgcttttaa taacatttgt taaagttaaa aaaaaaaaaa 1560
aaatcttcgg gggggggg 1578

<210> 167

<211> 1694

<212> DNA

<213> Homo sapiens

<400> 167

gcccacgcgt ccgcccacgc gtccgcccac gcgtssgggc ggcgggcgcg acggccgggc 60
gctcctgaag cagcagttat ggagcttccc tcagggccgg ggccggagcg gctctttgac 120
tcgcaccggc ttccgggtga ctgcttccta ctgctcgtgc tgctgctcta cgcgccagtc 180
gggttctgcc tcctcgtcct gcgcctcttt ctgggatcc acgtcttcct ggtcagctgc 240
gcgctgccag acagcgtcct tcgcagattc gtagtgcgga ccatgtgtgc ggtgctaggg 300
ctcgtggccc ggaggagga ctccggactc cgggatcaca gtgtcagggt cctcatttcc 360
aaccatgtga cacctttcga ccacaacata gtcaatttgc ttaccacctg tagcaccgtg 420
agtgaagcg aggccgarag cgccacgggg cggttccctg gggcccagct gaaggccccc 480
ctgtcccccac tcgcttccs catggaggat actgagcctt acccctaacc ccgacctct 540
acccaacatg tcagtttttt ttttcatttt cctcaatatt ttttctcttg ctttctcttc 600
tcctggttcc cagcctctac tcaatagtcc cccagcttt gtgtgctggt ctgggggctt 660
catggagatg aatggcggg ggaggttgt ggagtcactc aagagattct gtgttccac 720
gaggttccc cccactcctc tgctgctatt ccctgaggaa gaggccacca atggccggga 780
ggggtcctg cgttcagtt cctggccatt ttctatccaa gatgtggtac aacctcttac 840
cctgcaagtt cagagacccc tggctctgtg gacggtgtca gatgcctcct gggctctcaga 900
actgctgtgg tcacttttcg tccctttcac ggtgtatcaa gtaagggtggc ttcgtcctgt 960
tcacgccaa ctagggggag cgaatgagga gtttgactc cgtgtacaac agctggtggc 1020
caaggaattg ggccagacag ggacacggct cactccagct gacaaagcag agcacaatgaa 1080
gcgacaaaaga cccccagat tgcgccccca gtcagccag tcttctttcc ctccctcccc 1140
tggtccttct cctgatgtgc aactggcaac tctggctcag agagtcaagg aagttttgcc 1200
ccatgtgcc ttgggtgtca tccagagaga cctggccaag actggctgtg tagacttgac 1260
tatcactaat ctgcttgagg gggccgtagc tttcatgcct gaagacatca ccaagggaac 1320
tcagtcctta cccacagcct ctgcctccaa gtttcccagc tctggcccgg tgaccctca 1380
gccaacagcc ctaacatttg ccaagtcttc ctgggcccgg caggagagcc tgcaggagcg 1440
caagcaagca ctatatgaat acgcaagaag gagattcaca gagagacgag cccaggaggc 1500
tgactgagct caaaggaaca ggatggcacc cagagccgca ggacggagac tgggggcagc 1560
cctcacccaa ctcacaacag gctggatggg tgggtggtaa aaagggaagg atgaggctcc 1620
cccaatgtca cattaaattc atggttttca ttcaacaaaa aaaaaaaaaa aaaaaaaaaa 1680
aaaaaaaaact cgag 1694

<210> 168

<211> 1636

<212> DNA

<213> Homo sapiens

<400> 168

ggcacgagcg ccggagcgcg ctagccgcat tgcgagccga acccgggagc tggcgccatg 60
gtgctgttgc acgtgctgtt tgagcacgcg gtcggctacg cgctgctggc gctgaaggaa 120
gtggaggaga tcagtctgct gcagccgag gtggaggagt ccgtgctcaa cctgggcaaa 180

```

ttccacagca tcgttcgtct ggtggccttt tgccctttg cctcatccca ggttgccttg 240
gaaaatgcc aacgccgtgtc tgaaggggtt gttcatgagg acctccgcct gctcttggag 300
acccacctgc cgtccaaaaa gaagaaagta ctcttgggag ttggggatcc caagattggt 360
gccgcaatac aggaggagtt aggttacaac tgccagactg gaggagtcac agctgagatc 420
ctgcgaggag ttctgtctgca ctccacacat ctggtgaagg gtctgaccga tctgtcagct 480
tgtaaagcac agctggggct gggacacagc tattcccgtg ccaaagttaa gtttaattgtg 540
aaccgggtgg acaatatgat catccagtcc attagcctcc tggaccagct ggataaggac 600
atcaatacct tctctatgct gtctagggag tggtaggggt atcactttcc ggagctggtg 660
aagatcatca acgacaatgc cacatactgc cgtcttgccc agtttatttg aaaccgaagg 720
aactgaatga ggacaagctg gagaagctgg aggagctgac aatggatggg gccaaggcta 780
aggctattct ggaatgcctca cgttcctcca tgggcatgga catatctgcc attgacttga 840
taaacatcga gagcttctcc agtcgtgtgg tgtctttatc tgaataccgc cagagcctac 900
acacttacct gcgctccaag atgagccaag tagccccag cctgtcagcc ctaattgggg 960
aagcggtagg tgcacgtctc atcgcacatg ctggcagcct caccaacctg gccaagtatc 1020
cagcatccac agtcgagatc cttggggctg aaaaggccct gttcagagcc ctgaagacaa 1080
ggggtaacac cccaaaatat ggactcattt tccactccac cttcattggc cgagcagctg 1140
ccaagaacaa aggcgcgcatc tcccgatacc tggcaaacaa atgcagtatt gcctcacgaa 1200
tcgattgctt ctctgagggtg ccacgagtg tattcgggga gaagcttcga gaacaagtgtg 1260
aagagcgact gtccttctat. gagactggag agataccacg aaagaatctg gatgtcatga 1320
aggaagcaat ggttcaggca gaggaagcgg ctgctgagat tactaggaag ctggagaaac 1380
aggagaagaa acgcttaaaag aaggaaaaga aacggctggc tgcaactgcc ctgcgctctt 1440
cagaaaacag cagtagtact ccagaggagt gtgaggagay gagtgaaaaa cccaaaaaga 1500
agaaaaagca aaagccccag gaggttcctc aggrgratgg aatggaagac ccatctatct 1560
ctttctccaa acccaagaaa aagaaatctt tttccaagga ggagttgatg agtagcgatc 1620
ttgaagagac cgctgg 1636

```

<210> 169

<211> 667

<212> DNA

<213> Homo sapiens

<400> 169

```

ggcacgagck mgttttcttt tcctctaggg agagaagagg cgatggcggc gatggcatct 60
ctcggcgccc tggcgctgct cctgctgtcc agcctctccc gctgctcagc cgaggcctgc 120
ctggagcccc agatcacccc ttcctactac accacttctg acgctgtcat ttccactgag 180
accgtcttca ttgtggagat ctccctgaca tgcaagaaca gggtcagaa catggctctc 240
tatgctgacg tcggtggaaa acaattccct gtcactcgag gccaggatgt ggggcgttat 300
caggtgtcct ggagcctgga ccacaagagc gccacgcag gcacctatga ggttagattc 360
ttcgacgagg agtcctacag cctcctcagg aaggctcaga ggaataacga ggacatttcc 420
atcatcccgc ctctgtttac agtcagcgtg gaccatcggg gcacttgga cggggccctg 480
gtgtccactg aggtgctggc tgcggcgatc ggccttgtga tctactactt ggccttcagt 540
gcgaagagcc acatccaggc ctgagggcgg caccacagcc ctgcccttgc ttccttcaat 600
aaacatcaca ggacctggga ctgcacagga aaaaaaaaaa aaaactcgrg gggggccccg 660
tacccaa 667

```

<210> 170

<211> 3598

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature
<222> (1)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (16)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (22)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (964)
<223> n equals a,t,g, or c

<400> 170
ngcggtagcg tcgtgntgtg tngtgtttct gaaagctttg tggtttcggt gagctctcag 60
accgatttct agcgtccgtg ccggggacag gtgtcagagg tcgrctgctg cagacatggc 120
ggcctccacc gcggccggga agcagcggat tcccaaagt gccaagggtga aaaacaaagc 180
ccgggctgag gtacagataa ctgctgaaca actcttaaga gaggctaaag aaagagaact 240
tgagcttctt ccacctccac ctcaacagaa gatcacagat gaagaagaat taaatgatta 300
taaactaagg aaaaggaaga cttttgaaga taatataaga aaaaacagga ctgtgattag 360
taactggata aaatacgcac aatgggaaga aagcctaaag gagattcaaa gggctcgatc 420
catatacgag cgtgctttag atgtagacta ccgaaatatt acactctggc tgaaatacgc 480
agaaatggaa atgaagaatc gccaagtcam ccatgctcga aatatctggg accggggccat 540
aacaacgctg cctcgagtta atcagttctg gtacaagtac acgtacatgg aggaaatgtt 600
gggaaacggt gccggtgccg ggcaggtgtt tgagcgctgg atggagtggc agcctgagga 660
gcaagcctgg cactcctaca tcaactttga gctgagatac aaagaggtgg atcggggccc 720
caccatttat gagcgakttg tcctcgtgca ccctgatgtt aagaactgga tcaagtatgc 780
ccgctttgaa gaaaaacatg cttattttgc ccatgcacgg aaagtgtatg agagagctgt 840
ggaaattctt ggagatgaac atatggatga gcaccttat gttgcctttg ccaagtttga 900
agaaaatcag aaagagtttg aaagggtacg agtgatttac aagtatgcc tggacagaat 960
ttcnaaaca gatgcccaag aactctttaa aaattatacc atctttgaga agaagtttg 1020
tgataggcgg ggtattgaag atatcattgt gagcaaacgg agattccagt acgargaaga 1080
agtgaaggcg aatccacaca attatgatgc atggtttgat tacttgcgct tggtagaaag 1140
tgacgcagaa gctgaagccg tgagagaagt ctatgaaagg gccattgcca atgtcccacc 1200
cattcaggag aagaggcact ggaagcgcta catttatctt tggatcaact atgcactcta 1260
tgaagaattg gaggcaaagg atcctgagag gacaagacag gtgtatcaag cctctttgga 1320
actaattcct cacaaaaagt tcacatttgs caaaatgtgg atactgtatg cacagtttga 1380
aatacgacag aagaatctgt cattagccag aagagcattg ggaacttcca taggcaaag 1440
tccaaagaac aaattattta aagtttacat agaattggag ctacagcttc gagaatttga 1500
cagatgccgg aagctttatg aaaagttcct ggaatttgg cctgaaaatt gtacctcatg 1560
gattaaattc gctgaattag agacaatcct tggatgatatt gacagagcac gggcaatcta 1620
tgaattagcc atcagtcagc cacgtttaga catgccagag gtgctttgga aatcatatat 1680
tgattttgaa attgagcagg aagaaacaga aagaacacga aacctttacc ggcggttgct 1740
tcaacggacg cagcatgtca aggtatggat cagctttgct cagtttgagt tgtcttcagg 1800
aaaagaagga agtttgacta aatgcagaca aatttatgaa gaagctaaca aaaccatgcg 1860

aaactgtgaa gaaaaggaag agagacttat gctgctggaa tcttggcgaa gttttgaaga 1920
agaatttggga acagcttcag ataaggagag agtagacaaa ctcatgccag agaaagtcaa 1980
gaagagaaga aaggtccaga ctgatgatgg gtctgatgca ggctgggaag aatactttga 2040
ttacatcttt ccagaagatg ctgccaacca acctaacctc aaactcctgg ccatggccaa 2100
actgtggaag aaacagcagc aggaaaagga ggatgctgag caccatccag atgaggacgt 2160
cgatgagagt gaatcctgat ctttttttca tagacaaatg ttttgttatt ttataaaatt 2220
aattgtttgg aactcctgtg actcctggaa gttccttatat atttcaccag taagaaattg 2280
attggtatct ttgatggcta ctttttaagt tattttttta atgctcctgg gttagctagg 2340
ggtagggatt gcaagtaaag gactttttta actgctggat ttgtttttcc aacygagtcc 2400
aaacttttct aatgtctgtc cacatcatgc attaggaaat gtaattaagg taacattcta 2460
cagttacttt tcatgtcata ccataaaaga tagtttatgc attcatctga aatgtgtaac 2520
tttttcatgt cttcagagtc acagacttga gttcatttcc cagctactgc cactcatgat 2580
tatataactt aattttcatt ttcctcattc acaaaatggg ccaatagttt gacagctcat 2640
tttgaagatw acattataaa aggaatatac ctggtgggtg catagtaagt gtcagtaaa 2700
ttgtttgttc taagccactt ttaaaaatgg tttcattcct tgtagaattg aatgcgagtg 2760
gattaatwat ttaccttact ttcttactag tgtccagtta tattgttttt tagaacaaca 2820
cttgaaaaat aatttgcagt gattataatt ctgaacaagg ttcagaaaac attgtttact 2880
aagaatttag tctaataatt ycagttaggc gctcatcagt tctccagagt ggttgagtgt 2940
gtaatacctt gtttaaagaa taatggcttg ttcacgtgtg tgctatgaaa aatgatgtcc 3000
catgttcaca taaatttggtg aaattctgga ctaagactta agtctcgta atcaaatctc 3060
tttatagtta ggcttctgta cattatgtat ctccagtagc aatgttgcca tattatttat 3120
ttcccaaact tagtggacaa tggagtcatt tctacctaga gtaccagtaa acatctccca 3180
gtgtgctata gtagaaaatg tctactcctc actgctgaca tgttaaactt actccttggt 3240
tagagcatgt gtagaaacac ctaaggtagc tctatgctaa ataatgaaga gtagcacaag 3300
aatgaatgta tttgctgata cgttgctcac attctcaagc aaaaattcaa ctgcattaac 3360
cgatctgaga gttttccttt aacctggact gtgtttctca agcacatttt ttctttgttc 3420
actgcccag gactagaact gtatttttaa ggttggtttc ccctaaaagg acctttagta 3480
agcaaattta ttattaaatg tgcacatctt attcacccaa gggaataaaa gctacttcgt 3540
aatgttggtta ctaaatttta tcttgaaaat aaataacagt gtttgaggac araaaaaa 3598

<210> 171

<211> 940

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (8)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (12)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (919)

<223> n equals a,t,g, or c

<220>

<221> misc feature
<222> (935)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (938)
<223> n equals a,t,g, or c

<400> 171
gtggggntnc tntgtgttct cccactgacc acgctttctt tagtgactcc tgattgcctc 60
ctcaagtcgc agacactatg ctgcctccca tggccctgcc cagtgtatct tggatgctgc 120
tttcctgcct catgctgctg tctcagggtc aagggtgaaga accccagagg gaactgccct 180
ctgcacggat ccgctgtccc aaaggctcca aggcctatgg ctcccactgc tatgccttgt 240
ttttgtcacc aaaatcctgg acagatgcag atctggcctg ccagaagcgg ccctctggaa 300
acctggtgtc tgtgctcagt ggggctgagg gatccttcgt gtcctccctg gtgaagagca 360
ttggtaacag ctactcatac gtctggattg ggctccatga cccacacag ggcaccgagc 420
ccaatggaga aggttgggag tggagtagca gtgatgtgat gaattacttt gcatgggaga 480
gaaatccctc caccatctca agccccggcc actgtgcgag cctgtcgaga agcacagcat 540
ttctgagggt gaaagattat aactgtaatg tgaggttacc ctatgtctgc aagttcactg 600
actagtgcag gagggaagtc agcagcctgt gtttgggtgt caactcatca tgggcatgag 660
accagtgtga ggactcacc tgggaagagaa tattcgctta attcccccaa cctgaccacc 720
tcattcttat ctttcttctg tttcttctc cccgctgtca tttcagtctc ttcattttgt 780
catacggcct aaggctttta agagcaataa aatttttagt ctgcaaaaaa aaaaaaaaaa 840
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 900
aaaaaaaaaa aaaaaaanaa aaaaaaaaaa aaanaanaa 940

<210> 172
<211> 1458
<212> DNA
<213> Homo sapiens

<400> 172
gtaacagacg gcggcagtcg gagaaagccg aagatggcgg tccccgcggc gctgatccta 60
cgggagagcc ccagcatgaa gaaagcagtg tcaactgataa atgcaataga tacaggaaga 120
tttccacggg tgctcactcg gattcttcaa aaacttcacc tgaaggctga gagcagtttc 180
agtgaagaag aggaagaaaa acttcaagcg gcattttctc tagagaaaca agatcttcac 240
ctagttcttg aaacaatatc atttatttta gaacaggcag tgtatcaca tgtgaagcca 300
gcagctttgc agcagcaatt agagaacatt catcttagac aagacaaagc tgaagcattt 360
gtcaatackt ggtcttctat gggcaagaa acagttgaaa agttccggca gagaattctg 420
gctccctgta agctagagac ygttgatgg cagcttaacc ttcagatggc tcaactctgt 480
caagcaaac taaaatctcc tcaagctgtg ttacaactcg gagtgaacaa tgaagattca 540
aagagcctgg agaaagttct tgtggaattc agtcacaagg agttgtttga tttctataac 600
aagctagaga ctatacaagc acagctggat tcccttacat gatgttttcg aagactgttt 660
ttttcatcac gtcctgcca cctcattatt ttgcattgaa gatacattgc cagggtgtgt 720
tttctgaagg attcagtgac ttgctttctg taaattatat ggcttatcac ttcttagaca 780
aataacaacc aatagagatc attgttaaga atactgaggt tctaataac tttctttagt 840
tctgtgagcc aacagtaatt attaagaaca ctttcccttt aaaggaaaca aaagtgaata 900
ccatattggt tttactgtca tagtgtgtct tcttgccctg tcctgcttag tttttacttg 960
ctggatgata ccataatgta tcaaggagcg tccatggata caagataaga tgtgtacctt 1020
agtagaatac agagcttttg taattacatg aataaaaatta agaaaatagc catatacaat 1080

```

caaatacact atggcatttt tatttgaata tgatgagtat attttgcttc ggaaataata 1140
taggaaggaa atgtaaaata gtgagtagta tggatcaggt taattccagt ctgagcttct 1200
ctgtcaactt cagtttctct ctacagttta tgattttaata atagtccagg tttttgtgtg 1260
tttttcttta tactgcaaata taataatgat tcactttata gtttgggaga cagaatcagg 1320
tcttgaataa aataattgta atgagtgcta aatgggcacc attattcgaa tcagatacct 1380
tttatattct ctttccataa atacgttgat ttctgtcaat aaaatTTTTTg tgtcttagga 1440
aaaaaaaaaa aaagtcga 1458

```

<210> 173

<211> 2709

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (2595)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2622)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2659)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2670)

<223> n equals a,t,g, or c

<400> 173

```

ggggctgcga gagaggaagc tctttcgcgg cgctacggcg ttggcaccag tctctagaaa 60
agaagtcagc tctggttcgg agaagcagcg gctggcgctgg gccatccggg gaatggggcg 120
cctcgtgacc tagtggttgcg gggcaaaaag ggtcttgccg gcctcgtctg tgcagggggcg 180
tatctgggcg cctgarccgcg gcgtgggagc cttgggagcc gccgcagcag ggggcacacc 240
cgaaccggc ctgagcgccc gggaccatga acggggaggc catctgcagc gccctgccc 300
ccattcccta ccacaaactc gccgacctgc gctacctgag ccgcggcgcc tctggcactg 360
tgtcgtccgc ccgccacgca gactggcgcg tccaggtggc cgtgaagcac ctgcacatcc 420
acactccgct gctcgacagt gaaagaaagg atgtcttaag agaagctgaa attttacaca 480
aagctagatt tagttacatt cttccaattt tgggaatttg caatgagcct gaatttttgg 540
gaatagttac tgaatacatg ccaaattgat cattaaatga actcctacat aggaaaactg 600
aatatccctga tgttgcttgg ccattgagat ttgcctcct gcatgaaatt gcccttggtg 660
taaattacct gcacaatatg actcctcctt tactctatca tgacttgaag actcagaata 720
tcttattgga caatgaattt catgttaaga ttgcagattt tggtttatca aagtggcgca 780
tgatgtccct ctacacagtc cgaagtagca aatctgcacc agaaggaggg acaattatct 840
atatgccacc tgaaaactat gaacctggac aaaaatcaag ggccagtatc aagcacgata 900
tatatagcta tgcagttatc acatgggaag tgttatccag aaaacagcct tttgaagatg 960
tcaccaatcc tttgcagata atgtatagtg tgtcacaagg acatcgacct gttattaatg 1020

```


aagaaagttt gccatatgat atacctcacc gagcacgtat gatctctcta atagaaagtg 1080
gatgggcaca aaatccagat gaaagaccat ctttcttaaa atgtttaata gaacttgaac 1140
cagttttgag aacatttgaa gagataactt ttcttgaagc tggtattcag ctaaagaaaa 1200
caaagttaca gagtgtttca agtgccattc acctatgtga caagaagaaa atggaattat 1260
ctctgaacat acctgtaaat catgggtccac aagaggaatc atgtggatcc tctcagctcc 1320
atgaaaatag tggttctcct gaaacttcaa ggtccctgcc agctcctcaa gacaatgatt 1380
ttttatctag aaaagctcaa gactgttatt ttatgaagct gcatcactgt cctggaaatc 1440
acagttggga yagcaccatt tctggatctc aaagggtgc attctgtgat cacaagacca 1500
ctccatgctc ttcagcaata ataaatccac tctcaactgc aggaaactca gaacgtctgc 1560
agcctggtat agcccagcag tggatccaga gcaaaagga agacattgtg aaccaaata 1620
cagaagcctg ccttaaccag tgcgtagatg cccttctgtc cagggacttg atcatgaaag 1680
aggactatga acttggttagt accaagccta caaggacctc aaaagtcaga caattactag 1740
acactactga catccaagga gaagaatttg ccaaagttat agtacaaaaa ttgaaagata 1800
acaaacaaat gggctctcag ccttaccggg aaatacttgt ggtttctaga tcaccatctt 1860
taaatttact tcaaaaataaa agcatgtaag tgactgtttt tcaagaagaa atgtgtktca 1920
taaaaggata ttatatctc tgggtgcttg acttttttta tataaaatcc gtgagtatta 1980
aagctttatt gaaggttctt tgggtaaaata ttagtctccc tccatgacac tgcagtattt 2040
tttttaatta atacaagtaa aaagtttgaa ttttgctaca tagttcaatt tttatgtctc 2100
ttttgttaac agaaaccact tttaaaggat agtaattatt cttgtttata acagtgcctt 2160
aaggtatgat gtatttctga tgggaagccat ttacacattc atgttcttca tggattattt 2220
gttacttgkc taarawgcaa tttgatttta tgaagtatat accctttacc caccagagac 2280
agtacagaat ccctgcccta aaatcccagg ctttaattgcc ctacaaaggg ttattaattt 2340
aaaactccat tattaggatt acatttttaa gttttattta tgaattccct ttaaaaaatga 2400
tatttcaaag gtaaaacaat acaatataaa gaaaaaata aatatattaa taccggcttc 2460
ctgtcccat ttttaacctc agccttccct actgtcacca acaaccaagc taaataaagt 2520
caacagcctg atgtgtatct ttctgtccct ttcttctgc ttatatattag gaacatatgc 2580
tcatttgaga aaggntcttt ctgcatatta ttattataat tntacatcat actgcaacct 2640
gctttttgca tttaatagna caggcttcn ggtcaggtat gggctctaact taccctttta 2700
cttgggtggc 2709

<210> 174

<211> 1013

<212> DNA

<213> Homo sapiens

<400> 174

ggtgacatcc cagtgcctcg cgtgcaggca aggcacacct gaagcgtgcc atcctggggc 60
aggaggaggc gctgcggctg cagcccctgt gccgcgtcct gcgcgaggtg gacctgcttc 120
gggctgtgat ctcccagacg ctgcagcgt cactggccaa gtatgcggag ctcgaccgtg 180
aggatgactt ctgtgaggct gccgaggccc cggacatcca gcctaagacc caccagaagc 240
cagaggccag gatgccacgc ctgtcccagg ggaaggggcc tgacatcttc catcggtctg 300
ggcccctgtc tgtgttctca gccaaagaacc ggtggcggtt ggtggggccc gtccacctga 360
cccagaggaga gggcggtttt ggcttcacgc ttccgggaga ctgcctgtc ctcatcgctg 420
ccgtcatctc agggagccag gccgcggcgg ctggcctgaa ggagggcgac tacattgtgt 480
cagtgaattg gcagccatgc aggtggtgga gacacgcgga ggtggtgacg gagctgaagg 540
ctgcgggaga ggcgggcgcc agcctgcagc tgggtctcgt gctgcccagc tctagactgc 600
ccagcttggg ggaccgcggc ccgctcctgc tgggccccag ggggcttcta aggagccaga 660
gggagcatgg ttgcaagacc ccggcatcca cgtgggccag tccccgggcc ctccctcaact 720
ggagccgaaa ggcccagcag ggcaagactg gaggtgccc cagccctgtg cccagtgaa 780
gccagctccg gcctcatcct tgaagcacc aggggtggcc tgagggccag gatccctgca 840
cgctcagcc ctgggtccag ctggcagcaa gcaccgagca tgccctcccc acccagagga 900

cctccgggca atgcctgtcc cgcctcatgc tggaggtgc ctccggcacc tgcctgccc 960
ttaaagactg gtcagacctg aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 1013

<210> 175

<211> 1697

<212> DNA

<213> Homo sapiens

<400> 175

gcgtccgata gaaggggcta cagctcacgc atcgtgggtg gaaacatgtc cttgctctcg 60
cagtggccct ggcaggccag ccttcagttc cagggtctacc acctgtgcgg gggctctgtc 120
atcacgcccc tgtggatcat cactgctgca cactgtgttt atgacttgta cctccccaag 180
tcatggacca tccagggtggg tctagtttcc ctgttggaaca atccagcccc atcccacttg 240
gtggagaaga ttgtctacca cagcaagtac aagccaaaga ggctgggcaa tgacatcgcc 300
cttatgaagc tggccggggc actcacgttc aatgaaatga tccagcctgt gtgcctgccc 360
aactctgaag agaacttccc cgatggaaaa gtgtgctgga cgtcaggatg gggggccaca 420
gaggatggag cagggtgacgc ctcccctgtc ctgaaccacg cggccgtccc tttgatttcc 480
aacaagatct gcaaccacag ggacgtgtac ggtggcatca tctccccctc catgctctgc 540
gcgggctacc tgacgggtgg cgtggacagc tgccaggggg acagcggggg gcccctggtg 600
tgtcaagaga ggaggctgtg gaagttagtg ggagcgacca gctttggcat cggctgcgca 660
gaggtgaaca agcctggggg gtacaccctg gtcacctcct tcctggactg gatccacgag 720
cagatggaga gagacctaaa aacctgaaga ggaaggggac aagtagccac ctgagttcct 780
gaggtgatga agacagcccc atcctccccct ggactcccgt gtaggaacct gcacacgagc 840
agacaccctt ggagctctga gttccggcac cagtagcagg cccgaaagag gcacccttcc 900
atctgattcc agcacaaact tcaagctgct ttttgttttt tgtttttttg agatggagtc 960
tcgtctgtt gccaggctg gagtgcagtg gcgaaatccc tgctcactgc agcctccgct 1020
tccctgggtc aagcgattct cttgcctcag cttccccagt agctgggacc acagggtgcc 1080
gccaccacac ccaactaatt tttgtatttt tagtagagac agggtttcac catgttggtc 1140
aggctgctct caaacccctg acctcaaatg atgtgcctgc ttcagcctcc cacagtgtctg 1200
ggattacagg catgggccac cagcctagc ctcacgtcc tttctgatct tctaagaa 1260
caaaagaagc agcaacttgc aaggggcgcc tttcccactg gtccatcttg ttttctctcc 1320
aggggtcttg caaaattcct gacgagataa gcagttatgt gacctcacgt gcaaagccac 1380
caacagccac tcagaaaaga cgcaccagcc cagaagtgca gaactgcagt cactgcacgt 1440
tttcatctct agggaccaga accaaaccca ccctttctac ttccaagact tattttcaca 1500
tgtggggagg ttaatctagg aatgactcgt ttaaggccta ttttcatgat ttctttgtag 1560
catttggtgc ttgacgtatt attgtccttt gattccaaat aatatgtttc cttccctcat 1620
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1680
aaaaaaaaa aaaaaaa 1697

<210> 176

<211> 1409

<212> DNA

<213> Homo sapiens

<400> 176

acaatttaca caggaaacag ctatgacctat gattacgcca agctcgaaat taaccctcac 60
taaagggaac aaaagctgga gctccaccgc ggtggcgggc gctctagaac tagtgatcc 120
cccgggctgc aggaattccg ctgctggcct ggggttggtg ttgaggccgg gtctccgctc 180
ctgtgccccg gaagatggtg ctaggtggtt gcccgggttag ttacttactt ctgtgcggcc 240
aggcggcttt gctgctgggg aatttacttc tgctgcattg tgtgtctcgg agccactcgc 300
aaaatgcgac cgctgagcct gagctcacat ccgctggcgc cgcccagccg gagggccccg 360

```

ggggtgctgc gagctgggaa tatggcgacc cccactctcc ggtcatcctc tgctcttacc 420
tacctgatga atttatagaa tgtgaagacc cagtggatca tgttggaat gcaactgcat 480
cccaggaact tggttatggt tgtctcaagt tcggcggtca ggcctacagc gacgtggaac 540
acacttcagt ccagtgccat gccttagatg gaattgagtg tgccagtcct aggaccttc 600
tacgagaaaa taaaccttgt ataaagtata ccggacacta cttcataacc actttactct 660
actccttctt cctgggatgt tttggtgtgg atcgattctg tttgggacac actggcactg 720
cagtagggaa gctgttgacg cttggaggac ttgggatttg gtggtttgtt gaccttattt 780
tgctaattac tggagggctg atgccaagtg atggcagcaa ctggtgcaact gtttactaaa 840
aagagctgcc atcatggccc agggaggcgg gtgaaagctc cgtcttctga attcatctct 900
acaggctcaa aactcctctt tgatatcaga cctgatgtta ttttccttct tttggagggc 960
atttgtttgg ttaagaaggc ttctttggac tttggaattt caaccagat tttacctgac 1020
agacggaatg acaagcaaaa agtggtgtgg ggaatcaaat ttgttcctt cctcatgcac 1080
aaaacataaa ggatagtggc gaggttacaa gctgtggatg ggtttccata gtcttccttt 1140
ctgtacattg ctatatcttc agtccttttg agcaagtga cctaacaagt tgagcaaaa 1200
gaatatgttg atccatgttc ctcttgtgac cctgagtcct catgcaagga gatctgaagc 1260
tgaacaatga aaatcttcag cagaaataga aatggccgtg gattgtaata cacactgaaa 1320
ttctgacttt ctgaatttaa atgtagaata aattttacca acttgaaaaa aaaaaaaaaa 1380
aaaaaaaaaa aaaaaaaaaa aaactcgag                                     1409

```

<210> 177

<211> 1503

<212> DNA

<213> Homo sapiens

<400> 177

```

tgccacatca ccgggggtttc ttatttttagt gttttgtttt caagtttggg tgctttattt 60
ccattctcta aaagtaagtt tcttgctctt acgagagtta gtgttccttt tgaaccagg 120
tgttccacct gacagtgttt gtctttcata gactttccag aatagacata gtcaagatca 180
gacacgtgag cttctctctc attttaatgt gaggaaaatc atctttcaga gacaaggcac 240
cgcttagaaa tgtatgtcca ggtatgaaag aaccttttta aaatggctgg ttgttcaga 300
tccagatttc tctgcacact ggacttcgta gagtaagtgt ggtagacaaa gagactacac 360
tgcacaacca ccagtgaata tcattgctaa gaagactttg ggtcgtgttt ctcagccact 420
ctcacagctt ttgtagactt atttgatttt gaaacaagca gtagctaaa tctattttcc 480
ttttatgcat atatgttaat tggctcaact taatatggtg ttcttacaga atatgagccc 540
atttgaaaata aggttttagg caattttgct gttggctctg atttgatat agcaaattha 600
aagttacaga gtgtttccta gatagaagat tagttcattt ggttcatttt gtctttgaag 660
caagccaagc tcatgagcca gttggttatt tgtcataaat gaacacccat cactatatgc 720
tatgttgagg ggaggcaagt ctgatcttcg aataattgat aaagtthaat atctttgtag 780
ccaaaataca atttgcaaac cctaactcca gatgtgtcgt atgaatcttg acaaccagg 840
cttgagattt gttttactga ttgccaatca ggtatattat ttgtgatgtt cgtgggagca 900
tgcaaattag aagacagtgt tgtgggagtt cctcagtatt gaattacatg tgtgcaactca 960
ggcctgccag tcaactgaatt ctgacttgta aagggtttaa cctgctgttc caatcattga 1020
ggaccaattt gctttttgat aagattggaa aacatttatg gagactttcc cagttaaatc 1080
tatgacagtg tcccaactaa atagtgaat tagtatatt ctcagataac tgcaacacaa 1140
aattgaaatg tgccagtatg tcatctttct acctggaaga tactgtatat ttggaaagtt 1200
tatgcttctc tcaataaata catgttatta aataagccat atcacagttt aagaaattgt 1260
atatacttta tcatatgccc ttccagaaac caggatattt gcatatgatt gatttttagaa 1320
agattttgaa gctgggggtt gtccatgtta attaagatca aagtatatat atatatatat 1380
atatgtgctg tatttgcaac ttccacattg taatttccta tacacttatt aaagtattgt 1440
tttgccatgt ggtttattaa ataaaaatgt acagtctctt aaaaaaaaaa aagaaaaaaa 1500
aaa                                             1503

```

<210> 178
<211> 1378
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (3)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (82)
<223> n equals a,t,g, or c

<400> 178
aanctgcccc gcctgcaggt accggtccgg aattccccgg tcgacccacg cgttcgcccc 60
cgcgctccggg gaatgccata gntaattcac cagcagtaat cctttaataa ctggcagagc 120
actttattct tctggtgagc tccctgaata tttatttttc tgattataaa ttttctatat 180
tagtagcatt ttttaattat tacttcttca ctatagagca tttactttta gtctctagat 240
gtatatatttg gaatgctrta cttggcataa catagattaa aatcataatg catgactaaa 300
aactccttgg atttatttcc cattttaaaa tttttagcgg taagttcaga tttataatct 360
ttctctagac ttccatggtc tgaatgttgc ctgctgaagt agcaacctaa aaagtatccc 420
ctgcttatgc ttctccagtt ggccctccat gtccataggc ttgcacatctg tgattcagcc 480
cactgtgggt caaaaatatt tggggaaaaa aatggatggg tgcgcctttg ctgaacatgt 540
acaaactttt ttttgtcatt aaacaatata gtataacaac tatttacaaa gcatttacat 600
tgtattagct attataggta atctagagat gatttaaagt gtatggtagg atgtgcacag 660
gttatatgca aatactacac cattttctat aagggacttg aacatcatgg acttttagtat 720
cctagggggg tcttggaacc catcacccat aggggcacca taggacaact atagtaccgt 780
gtttatttcc tattaattca gggtccggtt agagtctaaa actaaaacct aatcatttag 840
tcacagtgtg aaaacaaatg gaaataacag ctcaaactct caaaatatta ctatagcatt 900
atgtttaaaa taatctacaa caaaaatgta ccattttcaa gcagtactac attaggagcc 960
cttttataga aaataatttc ttctttaccc ccgttccagt gtgaatctag tattctgtta 1020
acatttgtgt ggcatttgga gtttgtcatc cccattgaag ggagagcctt ctcagacatg 1080
aagcaagga aacatactga atagttttac acaaatattga tctggcttcc atttgtcccc 1140
ctcatttccc aaatgtttta atgtattgga tttggattct caatgtataa gttgccttat 1200
ctgttaatgt ctatcttctg tctctttaat tttgtatatc tgctgttttg cttttggata 1260
cattttctaa ttagaagtca catgataaat ataatcagta tagtaataat accataatgt 1320
gcacatactc aataaataaa tgactgcatt gttgtaaaaa aaaaaaaaaa aaaaaaaaaa 1378

<210> 179
<211> 2251
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (2020)
<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2050)

<223> n equals a,t,g, or c

<400> 179

```
ccgaaagaga aaacaggccg cgcgggcggc agaggagccg ggcgccgcaa tggacgtgcg 60
ggcgctgccg tggctgccgt ggctgctgtg gctgctgtgc cggggcgggc gcgatgcgga 120
ctcccgcgcc cccttcaccc cgacctggcc gcggagccgc gagcgtgaag ccgccgcctt 180
ccgggaaagt cttaatagac atcgatactt gaattcttta tttcccagtg aaaactccac 240
cgcttcttat ggaataaatc agttttccta tttgtttcct gaagagtta aagccattta 300
tttaagaagc aaaccttcca agtttcccag atactcagca gaagtacata tgtccatccc 360
caatgtgtct ttgccgttaa gatttgactg gagggacaag caggttgtga cacaagtgcg 420
aaaccgacag atgtgtggag gatgctgggc cttcagcgtg gtgggggcag tggaatctgc 480
ttatgcaata aaggggaagc ccctggaaga cctaagtgtc cagcaggtca ttgactgttc 540
gtataataat tatggctgca atggaggctc tactctcaat gctttgaact ggtaaaciaa 600
gatgcaagta aaactgggtga aagattcaga atatcctttt aaagcacaaa atggctctgtg 660
ccattacttt tctggttcac attctggatt ttcaatcaaa ggttattctg catatgactt 720
cagtgaccaa gaagatgaaa tggcaaaagc acttcttacc tttggccctt tggtagtcat 780
agtagatgca gtgagctggc aagattatct gggaggcatt atacagcatc actgctctag 840
tggagaagca aatcatgcag ttctcataac tgggtttgat aaaacaggaa gcactccata 900
ttggattgtg cggaattcct ggggaagtgc ttggggagta gatggttatg cccatgtcaa 960
aatgggaagt aatgtttgtg gtattgcaga ttccgtttct tctatatttg tgtgacatgt 1020
tgggcagatc aagagacagc tacaaaaatg aaggttttca taatgcaatg taacatagta 1080
cttcaaagta ttattcaact tcaagtttca gcaactacct acaaaagatt ctaaggccta 1140
gtagtattta aactaagttt cagaatgttc cttcttgta gagagatgga caaccaaagt 1200
cagtgggaca aactccagca cagaagcctg cgaggaagcc tatggaatag tttcctgtcc 1260
tgagacgaaa ttcagattag gagatatttt aggccctgc aactggggaa ggctactgtt 1320
tgtttttgtt tgcttattat ttatttgttt gtttattgtg agatatttca ggtgggatca 1380
aagaggtcat aagaatttat tttcttttgt ggggtgtaac tactagcttt agattacccc 1440
tatacacaag aatggccaac ctaaaattat gtgtgtcttg tacagttagt tatattagca 1500
gccctctgag atggcgtatc tatcggaagg atttcaaaca ccaattgctt tacctgaaca 1560
aatggtgctt accctttgaa cagcagagtg accaygtaga aggaaggaaa agggcaaaat 1620
cgcttcagtt aaactgaaat taaatgaaca ataaggcaac tatataagta acttctagta 1680
gcattgcctg agagacaaat tattgtttga taattttcat tgtgaatagg aatccaatag 1740
atcatattgc ttactttgtt cttttttatac tatagaataa tattttgttc tctagtatat 1800
caaaatacca aaatattatc tcatattttc tccctcttct tcttactctt taccaagttt 1860
tcctggtggc ttggcttccc tgactaaaga attaatgtctc atttttactt tccatktcta 1920
ttttcttacc acttggttggt ctccctttgt ctctgtactt tacsacgata ggatscactc 1980
ttcttctcct taatcataac acactctatc aagccactcn tagctgggac taacactgtg 2040
gttcagactn gtcagttccg cagcttctgc tcaactgatgt cttggacctg cgtcctgacg 2100
actgacaggc actgagctat ggccaagggtg tcggtgatct cgccgggttc tgaaagggtg 2160
ctcagaaaac tgtaggcatg agtctttacc aatcgagaat tgggactaga ctagtagacc 2220
tagtcgcttt cggtgacctg tccgtacgtt t 2251
```

<210> 180

<211> 1000

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (20)

<223> n equals a,t,g, or c

<400> 180

```
ctatagatca tagaggaatn gtagctgcag tacgggtccga attcccgggt cgacccacgc 60
gtccggggaa ggcgggagac agcgcagttt gaatcgcggt gcgacgaagg agtaggtggt 120
gggatctcac cgtgggtccg attagccttt tctctgcctt gcttgcttga gcttcagcgg 180
aattcgaaat ggctggcggg aaggctggaa aggactccgg aaaggccaag acaaaggcgg 240
tttcccgctc gcagagagcc ggcttgcagt tcccagtggt ccgtattcat cgacacctaa 300
aatctaggac gaccagtcac ggacgtgtgg gcgcgactgc cgctgtgtac agcgcagcca 360
tcctggagta cctcaccgca gaggtacttg aactggcagg aaatgcatca aaagacttaa 420
aggtaaagcg tattaccctt cgtcacttgc aacttgctat tcgtggagat gaagaattgg 480
attctctcat caaggctaca attgctgggt gtggtgtcat tccacacatc cacaaatctc 540
tgattgggaa gaaaggacaa cagaagactg tctaaaggat gcctggattc cttgttatct 600
caggactcta aatactctaa cagctgtcca gtgttggtga ttccagtggg ctgtatctct 660
gtgaaaaaca caattttgcc tttttgtaat tctatttgag caagttggaa gtttaattag 720
ctttccaacc aaccaaattt ctgcattoga gtcttaacca tatttaagtg ttactgtggc 780
ttcaaagaag ctattgattc tgaagtagtg ggttttgatt gagttgactg tttttaaaaa 840
actgtttgga ttttaattgt gatgcagaag ttatagtaac aaacatttgg ttttgtacag 900
acattatttc cactctgggtg gataagttca ataaagggtca tatcccaaaa aaaaaaaaaa 960
aaaaaaaaaa aaaaaaaaaa maaaaaaggg gggggccccc 1000
```

<210> 181

<211> 1429

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (761)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1407)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1420)

<223> n equals a,t,g, or c

<400> 181

```
actgggactc ccagcagagc ccaccagcca gccctggccc accccccagc ctccagagaa 60
gccccgcacg ggctgtctgg gtgtccgcca tccagggtct ggcagagcct ctgagatgat 120
gcatgatgcc ctcccctcag cgcaggctgc agagcccggc cccacctccc tgcgcccttg 180
aggggccccca gcgtctgcag ggtgacgcct garacagcac cactgctgag gagtgaggac 240
tgtcctccca cagacctgca gtgaggggcc ctccatgcgc agatgagggg ccactgaccc 300
acctgcgctt ctgctggagg aggggaagct gggcccaaag gccmgsgrag gcagcgtggg 360
ctctgccaat gtgggctgcc cctcgcacac agggctcaca gggcaggcct tgctgggggtc 420
```

```
cagggctgtt ggaggacccc gagggctgag gagcagcagg accgcctgc tcccatcctc 480
accagatca ggaaccaggg cctccctgtt cacggtgaca caggtcaggg ctgagagtga 540
ccctcrgctg tcacctgctc acagggatgc tgggtggctgg tgagaccccg cactgcasac 600
gggaatgcct aggtcccttc ccgacccagc cagctgcagg gcacggggac ctggatagtt 660
aagggctttt ccaaaccatgc atccatttac tgacacttcc tgtccttgtt catggagagc 720
tgttcgctcc tcccagatgg ctteggaggg ccgcaggscs nccttgacc ctggtgacct 780
cctgtmamtc actgaggcca tcagggccct gccccaggcc tggacgggcc ctccctccct 840
cctgtgcccc agctgccagg yggccctggg gaggggtggt gtggtgttgg gaaggggtcc 900
tgcaggggga ggaggacttg gagggctctgg gggcagctgt cctgaaccga ctgaccctga 960
ggaggccgct tagtgctgct ttgcttttca tcaccgtccc gcacagtga cggaggtccc 1020
cggttgctgg tcaggtcccc atggcttgtt ctctggaacc tgactttaga tgttttggga 1080
tcaggagccc ccaacacagg caagtccacc ccataataac cctgccagtg ccagggtggg 1140
ctggggactc tggcacagtg atgccgggag ccaggacagc agcactcccg ctgcacacag 1200
acggcctagg ggtggcgctc agaccccacc ctacgctcat ctctggaagg ggcagccctg 1260
agtgttctact ggtcaggcca gtggccaagc ctgctgtgtc cttcctccac aaggtcccc 1320
caccgctcag tgtcagcggg tgacgtgtgt tcttttgagt ccttgatga ataaaaggct 1380
ggaaacctaa aaaaaaaaaa aaaaaanggg ggccctctan aggttccaa 1429
```

<210> 182

<211> 2725

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (2713)

<223> n equals a,t,g, or c

<400> 182

```
taacagggca aaaaaagggc tggaaacttc gctatcatgg agatccaatg ccctgcccta 60
aggaagacac tccaattctt gtttgggagc ctgcgaagggt gcttgtgttt gtcagacaaa 120
tacagccagg cctgccaccc cttaggctcc aaagtccgga ggtgcagaaa gccaggacca 180
agagacaggc agctcaccag ggtggacaaa tcgccagaga tgtggtgcat tgtcctgttt 240
tcacttttgg catgggttta tgctgagcct accatgtatg gggagatcct gtccccaaac 300
tatcctcagg catatccag tgaggtagag aaatcttggg acatagaagt tcctgaaggg 360
tatgggattc acctctactt caccatctg gacattgagc tgtcagagaa ctgtgcgtat 420
gactcagtgc agataatctc aggagacact gaagaaggga ggctctgtgg acagaggagc 480
agtaacaatc cccactctcc aattgtggaa gaggttccaag tccatacaa caaactccag 540
gtgatcttta agtcagactt ttccaatgaa gacggttta cgggggttgc tgcatactat 600
gttgccacag acataaatga atgcacagat tttgtagatg tccctttagt ccacttctgc 660
aacaatttca ttggtggtta cttctgctcc tgcccccg aatatttcct ccatgatgac 720
atgaagaatt gcggagttaa ttgcagtggg gatgtattca ctgcactgat tggggagatt 780
gcaagtccca attatcccaa accatatcca gagaactcaa ggtgtgaata ccagatccgg 840
ttggagaaaag ggttccaagt ggtggtgacc ttgcggagag aagattttga tgtggaagca 900
gctgactcag cgggaaactg ccttgacagt ttagtttttg ttgcaggaga tcggcaattt 960
ggtccttact gtggtcatgg attccctggg sctctaaata ttgaaaccaa gagtaatgct 1020
cttgatatca tcttccaaac tgatctaaca gggcaaaaaa agggctggaa acttcgctat 1080
catggagatc caatgccctg ccctaaggaa gacactccca attctgtttg ggagcctgcg 1140
aaggcaaaat atgtctttag agatgtggtg cagataacct gtctggatgg gtttgaagtt 1200
gtggaggggc gtgttggtgc aacatctttc tattcgactt gtcaaagcaa tggaaagtgg 1260
agtaattcca aactgaaatg tcaacctgtg gactgtggca ttctgaatc cattgagaat 1320
```

```
ggtaaagttg aagaccaga gagcactttg tttggttctg tcatccgcta cacttgtgag 1380
gagccatatt actacatgga aaatggagga ggtggggagt atcactgtgc tggtaacggg 1440
agctgggtga atgaggtgct gggcccggag ctgccgaaat gtgttccagt ctgtggagtc 1500
cccagagaac cctttgaaga aaaacagagg ataattggag gatccgatgc agatattaaa 1560
aacttccccct ggcaagtctt ctttgacaac ccatgggctg gtggagcgct cattaatgag 1620
tactgggtgc tgacggctgc tcatgttgtg gagggaaaca gggagccaac aatgtatgtt 1680
gggtccacct cagtgcagac ctcacggctg gcaaaatcca agatgctcac tcctgagcat 1740
gtgtttattc atccgggatg gaagctgctg gaagtccag aaggacgaac caattttgat 1800
aatgacattg cactggtgcg gctgaaagac ccagtgaana tgggaccac cgtctctccc 1860
atctgcctac caggcacctc ttccgactac aacctcatgg atggggacct gggactgatc 1920
tcaggctggg gccgaacaga gaagagagat cgtgctgttc gcctcaaggc ggcaagggtta 1980
cctgtagctc ctttaagaaa atgcaaagaa gtgaaagtgg agaaaccac agcagatgca 2040
gaggcctatg ttttcaactc taacatgatc tgtgctggag gagagaaggg catggatagc 2100
tgtaaagggg acagtgggtg ggcctttgct gtacaggatc ccaatgacaa gaccaaattc 2160
tacgcagctg gcctgggtgc ctggggggccc cagtgtggga cctatgggct ctacacacgg 2220
gtaaagaact atgttgactg gataatgaag actatgcagg aaaatagcac cccccgtgag 2280
gactaatcca gatacatccc accagcctct ccaagggtgg tgaccaatgc attaccttct 2340
gttccttatg atattctcat tatttcatca tgactgaaag aagacacgag cgaatgattt 2400
aaatagaact tgattgttga gacgccttgc tagaggtaga gtttgatcat agaattgtgc 2460
tggtcatata tttgtgttct gactccttgg ggtcctttcc ccggagtacc tattgtagat 2520
aacactatgg gtggggcact cctttcttgc actattccac agggatacct taattctttg 2580
tttcctcttt acctgttcaa aattccattt acttgatcat tctcagtatc cactgtctat 2640
gtacaataaa ggatgtttat aagcaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2700
aaaaaaaaaa aanaaaaaaa aaaag 2725
```

<210> 183

<211> 1751

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (344)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (416)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1617)

<223> n equals a,t,g, or c

<400> 183

```
gggggaggga ggttgccggc gcgccggagc ggttctccag gctggcgagc gccaggaca 60
ggcatgttgt tgggactggc ggccatggag ctgaagggtg ggtgggatgg catccagcgt 120
gtggtctgtg ggggtctcaga gcagaccacc tgccagggaag tgggtcatcg actagcccaa 180
gcaataggcc agactggccg ctttgtgctt gtgcagcgcc ttcgggagaa ggagcggcag 240
ttgctgccac aagagtgtcc agtgggcgcc caggccacct gcggacagtt tgccagcgat 300
```



```

gtccagtttg tcctgagggc cacagggccc agcctagctg ggangccctc ctcagacagc 360
tgtccacccc cggaacgctg cctaattcgt gccagcctcc ctgtaaagcc acgggntgcg 420
ctgggctgtg agccccgcaa aacactgacc cccgagccag cccccagcct ctcacgccct 480
gggcctgcgg cctgtgaaca cccacaccag gctgctgcac agacctgcgg ggcctggagc 540
tcagggtgca gaggaatgct gaggagctgg gccatgaggc cttctgggag caagagctgc 600
gccgggagca ggcccgggag cgagagggac aggcacgcct gcaggcacta agtgccggca 660
ctgctgagca tgccgcccgg ctgcaggccc tggacgctca ggcccgtgcc ctggaggctg 720
agctgcagct ggcagcggag gcccctgggc cccctcacc tatggcatct gccactgagc 780
gcctgcacca ggacctggct gttcaggagc ggcagagtgc ggagggtgag ggcagcctgg 840
ctctgggtgag ccgggccctg gaggcagcag agcgagcctt gcaggctcag gctcaggagc 900
tggaggagct gaaccgagag ctccgtcagt gcaacctgca gcagttcatc cagcagaccg 960
gggctgcgct gccaccgccc ccacggcctg acaggggccc tcctggcact caggtcggag 1020
tggttctggg gggaggctgg gaggtgagga cctggcccar cccactcca agctgacttc 1080
ccaaccacaca gggccctctg cctcagccag agaggagtcc ctctggggc ctccctctga 1140
gtcccatgct ggtgcccgag ctaggccccg agggatatgtc tgtgcccac ctcccctgg 1200
ggcaccgggc cctcctgtgg ctgcagccac tgcagcctgt gtcctccgc agtgggcccc 1260
atgacgcaga actcctggag gtagcagcag ctctgcccc agagtgggtg cctctggcag 1320
cccagcccca ggctctgtga cagcctagtg agggctgcaa gaccatcctg cccggaccac 1380
agaaggagag ttggcggtca cagagggctc ctctgccagg cagtgggaag ccctgggttt 1440
ggcctcagga gctgggggtg cagtggggga ctgccctagt ccttgccagg tcgccagcac 1500
cctggagaag catggggcgt agccagctcg gaacttgcca ggcccaaaag gccacgactg 1560
cctgttgggg acaggagatg catggacagt gtgctcaagc tgtgggcatg tgcttgnctg 1620
cgggagaggt ccttcactgt gtgtacacag caagagcatg tgtgtgccac ttcccctacc 1680
ccaacgtgaa aacctcaata aactgcccga akyakaaaaa aaaaaaaaaa aaaaaaaaaa 1740
aaaaaaaaaa a 1751

```

<210> 184

<211> 2200

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (2096)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2140)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2157)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2181)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2184)

<223> n equals a,t,g, or c

<400> 184

```
ggcacgagca gcgacatact gaagggcaac ttctcaatcc gtacagccaa gatgcagcag 60
catgtgtgtg aaaccatcat ccgcatcttt aaaagacatg gagctgttca gttgtgtact 120
ccactactgc ttccccgaaa cagacaaata tatgagcaca acgaagctgc cctattcatg 180
gaccacagcg ggatgctggt gatgcttcct tttgacctgc ggatcccttt tgcaagatat 240
gtggcaagaa ataatatatt gaatttaaaa cgatactgca tagaacgtgt gttcaggccg 300
cgcaagttag atcgatttca tcccaaagaa cttctggagt gtgcatttga tattgtcact 360
tctaccacca acagctttct gcccaactgct gaaattatct acactatcta tgaaatcatc 420
caagagtttc cagcacttca ggaaagaaat tacagtatct atttgaacca taccatgtta 480
ttgaaagcaa tactcttaca ctgtgggac ccagaagata aactcagtca agtctacatt 540
attctgtatg atgctgtgac agagaagctg acgaggagag aagtggaaagc taaattttgt 600
aatctgtctt tgtcttctaa tagtctgtgt cgactctaca agtttattga acagaaggga 660
gatttgcaag atcttatgcc aacaataaat tcattaataa aacagaaaac aggtattgca 720
cagttggtga agtatggctt aaaagacctg gaggagggtt ttggactgtt gaagaaactc 780
ggcatcaagt tacaggctct gatcaatttg ggcttgggtt acaagggtgca gcagcacaat 840
ggaatcatct tccagtttgt ggctttcatc aaacgaaggc aaagggctgt acctgaaatc 900
ctcgcagytg gaggcagata tgacctgtct attccccagt ttagagggcc acaagctctg 960
gggccagttc ccactgccat tggggctcagc atagctatag acaagatatc tgctgctgtc 1020
ctcaacatgg aggaatctgt tacaataagc tcttgtgacc tcctggttgt aagtkttggt 1080
cagatgtcta tgtccagggc catcaacctg acccagaaac tctggacagc aggcatacaca 1140
gcagaaatca tgtacgactg gtcacagtcc caagaggaat tacaagagta ctgcagacat 1200
catgaaatca cctatgtggc ccttgtctcg gataaagaag gaagccatgt caagggttaag 1260
tctttcgaga aggaaaggca gacagagaag cgtgtgctgg agactgaact tgtggaccat 1320
gtactgcaga aactgaggac taaagtcact gatgaaagga atggcagaga agcttccgat 1380
aatcttgtag tgcaaaatct gaaggggtca ttttctaatt cttcagggtt gtttgaaatc 1440
catggagcaa cagtgtttcc cattgtgagt gtgctagccc cggagaagct gtcagccagc 1500
actaggaggc gctatgaaac tcaggtacaa actcgacttc agacctccct tgccaactta 1560
catcagaaaa gcagtgaaat tgaaattctg gctgtggatc tacccaaaga aacaatatta 1620
cagtttttat cattagagtg ggatgctgat gaacaggcat ttaacacaac tgtgaagcag 1680
ctgctgtcac gcctgccaaa gcaaagatac ctcaaattag tctgtgatga aatttataac 1740
atcaaagtag aaaaaaagggt gtctgtgcta tttctgtaca gctatagaga tgactactac 1800
agaatcttat tttaacccta aagaactgtc gttaacctca ttcaaacaga cagaggctta 1860
tactggaata atggaatgtt gtacattcat cataatttaa aattaaattc taagaagagg 1920
ctgggtgcag tggctcacac ctttaatccc agcactttgg gaagccaagg caggaagact 1980
gcttgaaacc aggagtttga gaccagcctg agcaacaaag caagacccca tctctataaa 2040
aactaaaaaa attagttggg catggtggca catgcctgta gtcccagcta ctccanaggc 2100
tgagatggat catctgagcc tcaggaggtt gacgctgcan tgactgtgac tgcgccnctg 2160
actccatctg gggcaacaga ncangaccct gcttaaatac 2200
```

<210> 185

<211> 1987

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (523)

<223> n equals a,t,g, or c

<400> 185

```

aactgtggcg cktttctggta aagatggacg tccacgatct ctttcgccgg ctccggcgcg 60
gggccaaatt cgacacgaga cgcttctcgg cagacgcagc tcgattccag ataggaaaaa 120
ggaaatatga ctttgattct tcggaggtgc ttcagggact ggactttttt ggaaacaaga 180
agtctgtccc aggtgtgtgt ggagcatcac aaacacatca gaagcccaa aatggagaga 240
aaaaagaaga gagcctaact gaaaggaaga gggagcagag caagaaaaaa aggaagacga 300
tgacttcaga aattgcttcc caagaagaag gtgctactat acagtggatg tcactctgtag 360
aagcaaagat tgaagacaaa aaagttcaga gagaaagtaa actaacttcc ggaaagttag 420
agaatctcag aaaagaaaag ataaacttct tgcggaataa acacaaaatt cacgtccaag 480
gaaccgatct tcctgaccca attgctacat ttcagcaact tgnaccagga atataaaatc 540
aattctcgac tacttcagaa cattctagat gcaggtttcc aaatgcctac gccaatccaa 600
atgcaagcca tccagttat gctgcatggt cgggaacttc tggcttctgc tccaactgga 660
tctggaaaaa cattgcttct tagcattcct attttaatgc agctgaaaca acccgcaaat 720
aaaggcttca gagccctgat tatatcacca acacgagAAC ttgccagcca gattcacaga 780
gagttaataa aaatttctga gggAACagga ttcagaatac acatgatcca caaagcagca 840
gtggcagcca agaaatttgg acctaaatca tctaaaaagt ttgatattct tgtgactact 900
ccaaatcgac taatctattt attaaagcaa gatcccccg gaatcgacct agcaagtgtt 960
gagtggcttg tagtagacga atcagataaa ctgtttgaag atggcaaaac tgggttcaga 1020
gaccagctgg cttccatttt cctggcctgc acatcccaca aggtccgaag agctatgttc 1080
agtgcaactt ttgcatatga tgttgaacag tggtgcaaac tcaacctgga caatgtcatc 1140
agtgtgtcca ttggagcaag gaattctgca gtagaaactg tagaacaaga gcttctcttt 1200
gttgatctg agaccgaaa acttctggcc gtgagagaac ttgttaaaaa gggtttcaat 1260
ccacctgttc ttgtttttgt tcagtccatt gaaagggcta aagaactttt tcatgagctc 1320
atatatgaag gtattaatgt ggatgttatt catgcagaga gaacacaaca acagagagat 1380
aacacagtcc acagtttcag agcaggaaaa atctgggttc tgatttgtac agccttgcta 1440
gcaagagggg ttgattttta aggtgtgaac ttggtgatca actatgactt tccaactagc 1500
tcagtggaa ataatccacag gataggtcga actggaagag cagggaataa gggaaaagca 1560
attacatttt tcaactgagga tgataagcca ttattaagaa gcgttgctaa tgttatacag 1620
caggctgggt gtcctgtacc agaatacata aaagggttttc agaaactact aagcaaacaa 1680
aagaaaaaga tgattaagaa accattggaa agggagagca ttagtacaac tccaaaatgt 1740
ttcttagaaa aagctaagga taaacagaaa aaggctactg gtcagaacag caagaagaaa 1800
gtagctcttg aagacaaaag ttaaaaacag actttaaaaa tactgtccca gaaatgtaat 1860
tttatgatcc cagcatgaat gttattttca tggaatactt gaagtcttac agtcacctgt 1920
accaaacatt tgaaatcaac tacaagtaca tgggactggt gataaatgat cctaaactat 1980
caagtca

```

<210> 186

<211> 1737

<212> DNA

<213> Homo sapiens

<400> 186

```

tcgagttttt tttttttttt ttttaaggta aaaaaaaat acaccttcag tttcctggtg 60
tgatcctggt taaaatggat gatttttcat tgaaagtgtt gctgattaac aattaaagtg 120
ggatgatatg tgggcaaaat cacttatgaa agtagaagca agaatacgtt ggtttgctac 180
cacataaagc catgctgttt ttggtcaaac tgtgtaaact ggaaaaattc acatcatttc 240
tgagtttaat cacttttaga tatattcaca ttgttttggt gaatttgctg aattgaattg 300
ttttcttttc tcaaatctgt gatctctttt ctttatcctg tttctttgtt cctttcggtt 360

```

```
gctttcttat ttttcttttg ttccattctt ttcttacttt tttccctttt ccttttttgg 420
ggaggctggc tagtagtggtg tgagaaaaga atagaagtga aatttgcata atgaatgtaa 480
aagggaaata aaagtctttt gaaggtagct atactagcac ttttgatcat cttcagggcc 540
cacaaaaatg ttgtcaagat tttaaagggt tataattctg cttaagctct agtttggact 600
taggtatcct aactatgttg gaggtatttg cattgtttta agttaggata aaagcaagtt 660
cctcctgtga ctgcaacgtc ttactgattg ggacagttgc caggaggata ccaacttgat 720
agcagagggg gttttatgca aacgcactca cctccgcctt ggggaatgaa agggtcactt 780
ctgcatcatc actagctagt tttctagtgt tagagaggtt tacaaatggt tgccattctc 840
ataagtgttt tgaacttgat ctttgtgact tgtgcttttt tagcttctct cttgaatcag 900
agtatcattg tcttcctcca aggaggttaga atttcccagt ttaaaacaaa aagggaaatg 960
tcctagggtt tctttgtgct tctcattttt cctttgttga ttcaattcct gtgatttttg 1020
ttctcttccc tgaagtgtt tacagtgcac ggaatctcca tcattgttat tttaacgata 1080
gtaattcaca gtcctcagaa gcctattttt aaagcagaag caaaaaagaa aaacaaaata 1140
acaaaaacaa cccttcctct tttctctcat ctcacctctc tgtgttgatt actaatcatc 1200
ttagatatta ttgctagtgg atgtatggta gatgggttga agcttttctg ataattatta 1260
cacaaattta aacaacatat atatttaaaa taaatatata cagtaaatat attgagccat 1320
gttaacctgc caatgagatc tgtgaaaaaa taatggcctc atttttctct ttttaatttc 1380
ttttaccctt ttgtgaagca gctatacgtg gcatacatgt atttaaagaa aaaaaaatag 1440
atgtagagtg ttttttttac acttttaact tagcatgtgg tgttgaagta ttactgtaga 1500
tcaagtttgt cttccgcact aagatgtgag gaaattgtga tttgttctct ccaccacaaa 1560
tgaattacac atttattatc ttctatcatt ttgaaacact gcagtttacc atgggacact 1620
gtatatatct cttgccataa tggtaaagga ctgattgata tatttaagag ttaataaatt 1680
tgtgatttct gctgaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa 1737
```

<210> 187

<211> 1132

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1131)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1132)

<223> n equals a,t,g, or c

<400> 187

```
ggcagagtgg acacctgcat caagaccaag tcgcagctga tgatgccagt ttcaaggccc 60
atgggcctgt ccccaacccc cagcccacgc acccagctag cctggaggag ttcaagagga 120
agatcctgga gtcccagagg cccctgcag gcacccctgt agcccatcc agtggtgag 180
gaggctccag gcctgaggac caagggatgg cccgactcgg cggtttgcgg aggatgcagg 240
gatatgctca cagcgcccga cacaaccccc tccgcgcgcc ccaaccacc cagggccacc 300
atcagacaac tccctgcatg caaaccccta gtacctctc acaccgcac ccgcgcctca 360
cgatccctca cccagagcac acggccgcgg agatgacgtc acgcaagcaa cggcgctgac 420
gtcacatata accgtggtga tggcgtcacg tggccatgta gacgtcacga agagatatag 480
cgatggcgct gtgcagatgc agcacgtcgc acacagacat ggggaacttg gcatgacgtc 540
acaccgagat gcagcaacga cgtcacgggc catgtcgcgc tcacacatat taatgtcaca 600
cagacgcggc gatggcatca cacagacggg gatgatgtca cacacagaca cagtgacaac 660
```

```

acacaccatg acaacgacac ctatagatat ggcaccaaca tcacatgcac gcatgccctt 720
tcacacacac tttctaccca attctcacct agtgtcacgt tcccccgacc ctggcacacg 780
ggccaaggta cccacaggat cccatcccct cccgcacagc cctggggcccc agcacctccc 840
ctcctccagc ttcctggcct cccagccact tcctcaccct cagtgcctgg acccggaggt 900
gagaacagga agccattcac ctccgctcct tgagcgtgag tgtttccagg accccctcgg 960
ggccctgagc cgggggtgag ggtcacctgt tgtcgggagg ggagccactc cttctcccc 1020
aactcccagc cctgcctgtg gcccgttgaa atgttggtgg cacttaataa atattagtaa 1080
atccttaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa nn 1132

```

<210> 188

<211> 1267

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (12)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (25)

<223> n equals a,t,g, or c

<400> 188

```

ggggatggat gntctccttc agctnttttg gagacactat agaaggtagc cctgcaggta 60
ccggtccgga attcccgggt tgatccacgc gtccgcccac gcgtccgccc acgcgtccgc 120
tggaaggcag ctatgcgact caccgtgctg tgtgctgtgt gcctgctgcc tggcagcctg 180
gccctgccgc tgcctcagga ggcgggaggc atgagtgagc tacagtggga acaggctcag 240
gactatctca agagatttta tctctatgac tcagaaacaa aaaatgccaa cagtttagaa 300
gccaaactca aggagatgca aaaattcttt ggcctaccta taactggaat gttaaactcc 360
cgcgctcatag aaataatgca gaagcccaga tgtggagtgc cagatgttgc agaatactca 420
ctatttccaa atagcccaaa atggacttcc aaagtgggtca cctacaggat cgtatcatat 480
actcgagact taccgcatat tacagtggat cgattagtgt caaaggcttt aaacatgtgg 540
ggcaaagaga tccccctgca tttcaggaaa gttgtatggg gaactgctga catcatgatt 600
ggctttgcgc gaggagctca tggggactcc taccatttg atgggccagg aaacacgctg 660
gctcatgcct ttgcgcctgg gacagggtctc ggaggagatg ctcaactcga tgaggatgaa 720
cgctggacgg atggtagcag tctagggatt aacttcctgt atgctgcaac tcatgaactt 780
ggccattctt tgggtatggg acattcctct gatcctaata cagtgatgta tccaacctat 840
ggaaatggag atccccaaaa ttttaaactt tcccaggatg atattaaagg cattcagaaa 900
ctatatggaa agagaagtaa ttcaagaaaag aaatagaaac ttcaggcaga acatccattc 960
attcattcat tggattgtat atcattgttg cacaatcaga attgataagc actgttcctc 1020
cactccattt agcaattatg tcaccctttt ttattgcagt tggtttttga atgtctttca 1080
ctccttttaa ggataaactc ctttatgggtg tgactgtgtc ttattcatct atacttgacg 1140
tgggtagatg tcaataaatg ttacatacac aaataaataa aatgtttatt ccatggtaaa 1200
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1260
aaaataa 1267

```

<210> 189

<211> 3787

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (22)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (155)

<223> n equals a,t,g, or c

<400> 189

```
agtcgggaat tcccgggttt gntgacgcgt ccgcagcaag gtgcctcgct gtgtcaacac 60
tcagcctggc ttccactgcc tgccctgccc gccccgatac agaggggaacc agcccgtcgg 120
ggtcggcctg gaagcagcca agacggaaaa gcaantgtgt gagcccgaaa acccatgcaa 180
ggacaagaca cacaactgcc acaagcacgc ggagtgcac tacctgggtc acttcagcga 240
ccccatgtac aagtgcgagt gccagasagg ctacgcgggc gacgggctca tctgcgggga 300
ggactcggac ctggacggct ggcccaacct caatctgggtc tgcgccacca acgccaccta 360
ccactgcatc aaggataact gcccccatct gccaaaattct gggcaggaag actttgacaa 420
ggacgggatt ggcgatgcct gtgatgatga cgatgacaat gacggtgtga ccgatgagaa 480
ggacaactgc cagctcctct tcaatccccg ccaggctgac tatgacaagg atgaggttgg 540
ggaccgctgt gacaactgcc cttacgtgca caaccctgcc cagatcgaca cagacaacaa 600
tggagagggg gacgcctgct ccgtggacat tgatggggac gatgtcttca atgaacgaga 660
caattgtccc tacgtctaca acactgacca gagggacacg gatggtgacg gtgtggggga 720
tcaactgtgac aactgcccc tggtgcacaa ccttgaccag accgacgtgg acaatgacct 780
tgttggggac cagtgtgaca acaacgagga catagatgac gacggccacc agaacaacca 840
ggacaactgc ccctacatct ccaacgcaa ccaggctgac catgacagag acggccaggg 900
cgacgcctgt gaccctgatg atgacaacga tggcgtcccc gatgacaggg acaactgccg 960
gcttgtgttc aaccagacc aggaggactt ggacggtgat ggacggggtg atatttgtaa 1020
agatgatttt gacaatgaca acatcccaga tattgatgat gtgtgtcctg aaaacaatgc 1080
catcagttag acagacttca ggaacttcca gatggtcccc ttggatccca aagggaccac 1140
ccaaattgat ccaactggg tcattcgcca tcaaggcaag gagctgggtc agacagccaa 1200
ctcggacccc ggcatcgctg taggttttga cgagtgtggg tctgtggact tcagtggcac 1260
attctacgta aacactgacc gggacgacga ctatgccggc ttcgtctttg gttaccagtc 1320
aagcagccgc ttctatgtgg tgatgtggaa gcagggtgacg cagacctact gggaggacca 1380
gcccacgcgg gcctatggct actccggcgt gtccctcaag gtggtgaact ccaccacggg 1440
gacgggagag cacctgagga acgcgctgtg gcacasgggg aacacgccgg ggcagggtgcg 1500
aaccttatgg cagacccca ggaacattgg ctggaaggac tacacggcct ataggtggca 1560
cctgactcac aggcccaaga ctggctacat cagagtctta gtgcatgaag gaaaacaggt 1620
catggcagac tcaggacctt tctatgacca aacctacgtt ggcgggagggc tgggtctatt 1680
tgtcttctct caagaaatgg tctatttctc agacctcaag tacgaatgca gagatattta 1740
aacaagattt gctgcatttc cggcaatgcc ctgtgcatgc catggtccct agacacctca 1800
gttcattgtg gtccttgtgg cttctctctc tagcagcacc tcctgtccct tgaccttaac 1860
tctgatgggt cttcacctcc tgccagcaac cccaaaccca agtgccttca gaggataaat 1920
atcaatggaa ckcagagatg aacatctaac ccactagagg aaaccagttt ggtgatatat 1980
gagactttat gtggagtga aattgggcat gccattacat tgcttttctt tgtttgttta 2040
aaaagaatga cgtttacata taaaatgtaa ttacttattg tatttatgtg tatatggagt 2100
tgaagggaat actgtgcata agccattatg ataaattaa catgaaaaat attgctgaac 2160
tacttttggg gcttaaagtt gtcactattc ttgaattaga gttgctctac aatgacacac 2220
aaatcccrtt aaataaatta taaacaaggg tcaattcaaa tttgaagtaa tgtttttagta 2280
```

```
aggagagatt agaagacaac aggcatagca aatgacataa gctaccgatt aactaatcgg 2340
aacatgtaaa acagttacaa aaataaacga actctcctct tgcctacaa tgaaagccct 2400
catgtgcagt agagatgcag tttcatcaaa gaacaaacat ccttgcaaat ggggtgtgacg 2460
cgggtccaga tgtggatttg gcaaaacctc atttaagtaa aagggttagca gagcaaagt 2520
cgggtgcttta gctgctgctt gtgccgctgt ggcgtcgggg aggctcctgc ctgagcttcc 2580
ttccccagct ttgctgctg agaggaacca gagcagacgc acaggccgga aaaggcgcat 2640
ctaacgcgta tctaggcttt ggtaactgcy gacaagttgc ttttacctga tttgatgata 2700
catttcatta aggttccagt tataaatatt ttgttaatat ttattaagt 2760
gcaactccat ttaccagtaa cttattttta atagcctag taacacatat gtagtataat 2820
ttctagaaac aaacatctaa taagtatata atcctgtgaa aatatgaggc ttgataatat 2880
taggttgatc cgatgaagca tgctagaagc tgtaacagaa tacatagaga ataatgagga 2940
gtttatgatg gaaccttaat atataatgtt gccagcgatt ttagttcaat atttgttact 3000
gttatctatc tgctgtatat ggaattcttt taattcaaac gctgaaaacg aatcagcatt 3060
tagtcttgcc aggcacaccc aataatcagt catgtgtaat atgcacaagt ttgtttttgt 3120
ttttgttttt tttgttggtt ggtttgtttt tttgctttta gttgcatgat cttctgcag 3180
gaaatagtca ctcacccac tccacataag gggtttagta agagaagtct gtctrctga 3240
tgatggatag ggggcaaac tttttccctt ttctgttaat agtcatcaca tttctatgcc 3300
aaacaggaac gatccataac tttagtctta atgtacacat tgcattttga taaaattaat 3360
tttgttggtt cctttgaggt tgatcgttgt gttgttggtt tgctgcactt tttacttttt 3420
tgctgttgga gctgtattcc cgagaccaac gaagcggttg gatacttcat taaatgtagc 3480
gactgtcaac agcgtgcagg tttctgttt ctgtgttggt gggcaaccg tacaatggtg 3540
tgaggagtgc gatgatgtga atatttagaa tgtaccatat tttttgtaaa ttatttatgt 3600
ttttctaaac aaatttatcg tatagggtga tgaaacgtca tgtgttttgc caaagactgt 3660
aaatatatat ttatgtgttc acatggtcaa aatttcacca ctgaaaccct gcacttagct 3720
agaacctcat ttttaaagat taacaacagg aaataaattg taaaaaagg tttctataaa 3780
aaaaaaa 3787
```

<210> 190

<211> 554

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (520)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (542)

<223> n equals a,t,g, or c

<400> 190

```
ggcagaggga cagcaacatt tcccacagga cagartttg tcggcccttg ccttggcaga 60
gctgaggcat tttggagatc aaagatgggt agaaaagatg ctgctactat aaaacttcct 120
gttgatcagt acagaaaaca aattggtaaa caggattata aaaaaactaa acctatttta 180
cgagcaacca aattaaaagc agaagcaagc aaaacagcaa taggcataaa ggaagttggc 240
cttgacttg cagctatatt ggcactacta ctggctttct atgctttctt ttatctcaga 300
ctcaccacgg atgttgacce tgatctggac caagatgaag attagctaag caacaatcaa 360
tgcatgaaag agaaataact ttacgaaagc accttttggg accaaaaactt tcaatactga 420
aactgtaaca tctttaattm tttctgctaa tattttcagt ttgcagacat atgatttttg 480
```

atagttgcat aggatgtcag gaaaagaacc ttacctagcn atgcagtata gtatgtgcta 540
cngggatact tgta 554

<210> 191

<211> 874

<212> DNA

<213> Homo sapiens

<400> 191

ggcacagacg ggatgaggcg ctgcagtcct tgcgctttcg acgccgcccc gggggcccagg 60
cggctgatgc gtgtgggcct cgcgctgata ttgggtgggc acgtgaacct gctgctgggg 120
gccgtgctgc atggcaccgt cctgcggcac gtggccaatc cccgcggcgc tgtcacgccg 180
gagtacaccg tagccaatgt catctctgtc ggctcggggc tgctgagcgt ttccgtggga 240
ttgtggccct cctggcgtcc aggaamcttc ttcgccctcc actgcactgg gtcctgctgg 300
camtagctct ggtgaacctg ctcttgctcg ttgcctgctc cctgggcctc cttcttgctg 360
tgtcactcac tgtggccaac ggtggccgcc gccttattgc tgactgccac ccaggactgc 420
tgatcctct ggtaccactg gatgaggggc cgggacatac tgactgcccc ttgacccca 480
caagaatcta tgatacagcc ttggctctct ggatcccttc tttgctcatg tctgcagggg 540
aggctgctct atctgggttac tgctgtgtgg ctgcactcac tctacgtgga gttgggccct 600
gcaggaagga cggacttcag gggcagctag aggaaatgac agagcttgaa tctcctaaat 660
gtaaaaggca ggaaaatgag cagctactgg atcaaaatca agaaatccgg gcatcacaga 720
gaagtgtggg ttaggacagc aggtgctgtt ccgagactca gtcctaaagg gttttttttc 780
ccactaagca agggggccctg acctcgggat gagataacaa attgtaataa agtaacttct 840
cttttcttct aaaaaaaaaa aaaaaaaact cgag 874

<210> 192

<211> 2103

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (140)

<223> n equals a,t,g, or c

<400> 192

tagtagtaaa caggtgggga ctccattgcc agcttggtgc cttatctact gggcagtcga 60
gttggtgtct tcatgggcag aaataggttg taaagggtgc caactctcca ggtgagagag 120
agttttgtag caggactttt ggttgtaaata cgactattac caacctactg gtgggtgaga 180
gttcaagaaa cccatgaaaa aggacatagt ggaagatgaa gatgatgact ttctgaaagg 240
cgaagtgcc cagaatgata ccgtgattgg gatcacacca agctcctttg acacgcattt 300
ccgaagtcc tcaagtagtg tgggctcccc acccgtgttg tacatgcaac ccagtcccct 360
ctgacggcag aaatttgtag ctgagatgtg acatttgagg ttccccatca cttgtcatgc 420
cctcagcacc cagcttggtg cattgggcat tgatggcatt gaactagagc gagtgcctgc 480
ctcggctgtg gcaattccag gttcgactga atcaagcatc tgaagactgg gtttttttgt 540
tggtgtgtgt ccccttacag acaaaatgaa gactatcatg tgcaatcttt tacagtgggg 600
ttgatgatac atttggaagg atttgcttgt ttaatatgta cattttttgt gttaacagct 660
ttttgacaca attactgggt aatttctaata ataggcagca gactgtttta cgggttgctg 720
ttttaacatg ggtttttgtc agatccatgg tcttaggact tgactgatga gctttcagt 780
aagaatcctc taagataaaa cttctattta aagactttaa ctagaaagtg tttattttgg 840
ctacattgtt caccttctgc tgtattggta tttgtctgtt gggatttcaa gggagtgtag 900


```
agaagacaga aggaaagctg agagctggcc cgacatgggc tgggacacag agttggagct 960
ggcactgaag atctccaggg acttcagaga ccaataaaag cccatagggg agagagagag 1020
gatatagggg aacagaatca gatgtgtaat atacttggca cagcgaaaaa atggatttaa 1080
aagacaaaaa tggaggtcca ggtagatgta attcacacag actgaaagtg agttcgggct 1140
tgtgtaaaaa acatgagatt ggatttgacc ccttggctct caagtgtccc cttagatcta 1200
gaactgctcc ttggtggcca ttagatcgag tcagttttga tctgcatcac ttagttattg 1260
ggaattttct tgttggaaac aggaaaattt ttttagatta tttggtgtac ggttttgctc 1320
acaacaatag gtggaagtgt ctagtgcagt cttggtctga tggctgtgtg catcgacat 1380
tcggcttggg gaaatccttc tctaaagcct ctttttgtat ttttataact aaacagagga 1440
agtcttcaga agacctcgct ttaaaacaaa tttgtgcaaa cactgctaga gtcattttga 1500
agctcaagca ttttactttt gtttcttaca tgtgtacttt tttgtttact tgtgaaaatg 1560
gccatcttta agcatattta ttttctgcca ctttatttaa aggcaagcaa tattttcttg 1620
atcataaata ttttgtaatg aaataacttc tcttttccag ggctttgtat gcacttgat 1680
aattacattg atggcaatgt agagtttgaa tttcagctgt taaatacttt tttggaaaat 1740
agaaatTTTT attgctttta agttttggat atgggtgggt ttcttttccg ggtttgggtg 1800
aaagtaattt gagaacttta aggttgcctt tttactgct ggcaaaatgt tgatttttta 1860
atattagata aaacgagtaa acgaaattcc ccagaaatta gtagtaagt gggtctttgt 1920
gggttgggaa gtagttttta tgtagaaaga catttacata taagtctgt taatttcaaa 1980
ggagtttgtg aaaaaaatc catggtgaaa atgaaacaat gacatggta atctggaact 2040
tacgttctta taccaataaa aggtacctca atamaaaaaa aaaaaaaaaa accccggggg 2100
ggg 2103
```

<210> 193

<211> 1317

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1314)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1315)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1316)

<223> n equals a,t,g, or c

<400> 193

```
agcatagcct tcgtgtgaag gccagtgaac agcagctgag ctaattcatg aggtatttgc 60
ccttctgaag ttggaatctg taatgattta aaacatgaga ctggtccagt gggcttggtg 120
ctccagacct catgccttct gggaccaga catctctgca atctcgggaa ctggaatata 180
ccacttcttg tcaaggtact agcaagttgc cgtggataca gaaatctctg caggcaagtt 240
gctccagagc atattgcagg acaagcctgt aacgaatagt taaattcacg gcactctgat 300
tcctaatacct tttccgaaat ggcaggtgtg agtgccctga taaaatattc tatgtttacc 360
ttcaacttct tgttctggct atgtggtatc ttgatcctag cattagcaat atgggtacga 420
gtaagcaatg actctcaagc aatttttggg tctgaagatg taggctctag ctccctacgtt 480
```

```

gctgtggaca tattgattgc ttaggtgcc atcatcatga ttctgggctt cctgggatgc 540
tgcggtgcta taaaagaaaag tcgctgcatg cttctgttgt ttttcatagg cttgcttctg 600
atcctgctcc tgcaggtggc gacaggtatc ctaggagctg ttttcaaadc taagtctgat 660
cgcattgtga atgaaactct ctatgaaaac acaaagcttt tgagcgccac aggggaaagt 720
gaaaaacaat tccaggaagc cataattgtg tttcaagaag agtttaaag ctgcggtttg 780
gtcaatggag ctgctgattg gggaaataat tttcaacact atcctgaatt atgtgcctgt 840
ctagataagc agagaccatg ccaaagctat aatggaaaac aagtttaca agagacctgt 900
atctctttca taaaagactt cttggcaaaa aatttgatta tagttattgg aatatcattt 960
ggactggcag ttattgagat actgggtttg gtgttttcta tggtcctgta ttgccagatc 1020
gggaacaaat gaatctgtgg atgcatcaac ctatcgctcag tcaaaccctt taaaatgtt 1080
gctttggctt tgtaaattta aatatgtaag tgctatataa gtcaggagca gctgtctttt 1140
taaaatgtct cggctagcta gaccacagat atcttctaga catattgaac acatttaaga 1200
tttgagggat ataagggaaa atgatatgaa tgtgtatttt tactcaaat aaaagtaact 1260
gtttacgttg aaaaaaaaaa aaaargkcgg ccgytytara gayccarctt actnnnc 1317

```

<210> 194

<211> 1252

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1231)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1240)

<223> n equals a,t,g, or c

<400> 194

```

gccacgmgc ggccgcgcgg aggaggccaa gatggcgga gctgcggctt cgcttcgcgg 60
ggtagtgttg ggccgcgcgg gcgcggggct cccgggcgcg cgtgcccggg gtctgctgtg 120
cagcgcgcgg cccgggcagc tcccgcctacg gacacctcag gcagtggcct tgctgctgaa 180
gtctggcctt tcccgcggcc ggaaagtgat gctgtcagcg ctgggcatgc tggcggcagg 240
gggtgcgggg ctggccgttg ctctgcattc ggctgtgagt gccagtgacc tggagctgca 300
ccccccagc tatccgtggt ctccaccgtg cctcctctct tccttgacc acaccagcat 360
ccggaggggt ttccaggat ataagcagg gtgcgcctcc tgccacagca tggacttcgt 420
ggcctaccgc cacctggttg gcgtgtgcta caggaggat gaagctaagg agctggctgc 480
ggaggtggag gttcaagacg gcccacatga agatggggag atgttcatgc ggccaggga 540
gctgttcgac tatttcccaa aaccataccc caacagttag gctgctcgag ctgccaacaa 600
cggagcattg cccctgacc tcagctacat cgtgcgagct aggcattggt gtgaggacta 660
cgtcttctcc ctgctcagcg gctactgca gccaccacc ggggtgtcac tgcgggaagg 720
tctctacttc aaccctact ttcttgcca ggccattgcc atggcccctc ccatctacac 780
agatgtctta gagtttgacg atggcaccac agctaccatg tcccagatag ccaaggatgt 840
gtgcaccttc ctgcgctggg catctgagcc agagcacgac catcgaaaac gcatggggct 900
caagatgttg atgatgatg ctctgctggt gccctggtc tacaccataa agcggcacaa 960
gtggtcagtc ctgaagagtc ggaagctggc atatcgccg cccaagtgc cctgtccagt 1020
gtctgttgc catctgcca gaacaggccc tcaagcccaa gagccatccc agcctgttca 1080
ggcctcagct aagcctctct tcatctgga gaagaggcaa gggggcagga gaccaggctc 1140
tagctctggg ccctccttca gcccacatca tgggaataaa ttaattttct caatgtaaaa 1200

```

aaaaaaaaa aaaactcggg gggggcccgg ncccaatttn cccttttggg gg 1252

<210> 195

<211> 1688

<212> DNA

<213> Homo sapiens

<400> 195

ggcacgagcg gaactgctcc ggagggcacg ggctccgtag caccaactgc aaggaccct 60
ccccctgcgg gcgctcccat ggcacagttc gcgttcgaga gtgacctgca ctcgctgctt 120
cagctggatg caccatcccc caatgcaccc cctgcgcgct ggcagcaaaa gccaaaggaag 180
ccgcagcccg gccccctcac ccatgcgggc cgccaaccga tcccacagcg ccggcaggac 240
tccgggccga actcctggca aatccagttc caaggttcag accactccta gcaaacctgg 300
cggtgaccgc tatatcccc atcgcagtg tgcacagatg gaggtggcca gcttcctcct 360
gagcaaggag aaccagcctg aaaacagcca gacgccacc aagaaggaa atcagaaagc 420
ctgggctttg aacctgaacg gttttgatgt agaggaagcc aagatccttc ggctcagtgg 480
aaaaccacaa aatgcgccag agggttayca gaacagactg aaagtactct acagccaaaa 540
ggccactcct ggctccagcc ggaagacctg ccgttacatt ccttccttgc cagaccgtat 600
cctggatgcg cctgaaatcc gaaatgacta ttacctgaac cttgtggatt ggagttcttg 660
gaatgtactg gccgtggcac tggacaacag tgtgtacctg tggagtgcaa gctctggtga 720
catcctgcag cttttgcaaa tggagcagcc tggggaatat atatcctctg tggcctggat 780
caaagagggc aactacttgg ctgtgggcac cagcagtgtc gaggtgcagc tatgggatgt 840
gcagcagcag aaacggcttc gaaatatgac cagtcactct gcccgagtgg gctccctaag 900
ctggaacagc tatatcctgt ccagtgggtc acgttctggc cacatccacc accatgatgt 960
tcgggtagca gaacaccatg tggccacact gagtggccac agccaggaag tgtgtgggct 1020
gcgctgggccc ccagatggac gacatttggc cagtgggtgt aatgataact tgggtcaatgt 1080
gtggcctagt gctcctggag aggggtggctg gggtcctctg cagacattca ccagcatca 1140
aggggctgtc aaggccgtag catggtgtcc ctggcagtc aatgtcctgg caacaggagg 1200
gggcaccagt gatcgacaca ttcgcatctg gaatgtgtgc tctggggcct gtctgagtgc 1260
cgtggatgcc cattcccagg tgtgtcccat cctctggtct cccattaca aggagctcat 1320
ctcaggccat ggctttgcac agaaccagct agttatcttg aagtacccaa ccatggccaa 1380
gggtggctgaa ctcaaaggct acacatcccc ggctcctgagt ctgacctga gccagatgg 1440
ggccacagtg gcatccgcag cagcagatga gaccctgagg ctatggcgct gttttgagtt 1500
ggaccctgcg cggcgggcgg agcgggagaa ggccagtgc gccaaaagca gcctcatcca 1560
ccaaggcatc cgctgaagac caaccatca cctcagttgt tttttatttt tctaataaag 1620
tcatgtctcc cttcatgttt tttttttaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1680
aaaaaaaaa 1688

<210> 196

<211> 756

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (756)

<223> n equals a,t,g, or c

<400> 196

ggcacgagcc gccctcggcg tcctctgtag cgggcgacct aggcgcggg acccgagcg 60
aggtagaggc cagggcagcg cgtccgggag cggagtcgc gccgcgcgc gccatgccgg 120

acagctggga caaggatgtg taccctgagc ccccgcgccg cacgccggtg cagcccaatc 180
ccatcgtcta catgatgaaa gcgttcgacc tcatcgtgga ccgacccgtg accctcgtga 240
gagaatttat agagcggcag cacgcaaaga acaggtatta ctactaccac cggcagtacc 300
gccgcgtgcc agacatcact gagtgcagg aggaggacat catgtgcatg tatgaagccg 360
aaatgcagtg gaagagggac tacaaagtcg accaagaaat tatcaacatt atgcaggatc 420
ggctcaaagc ctgtcagcag aggggaaggac agaactacca gcagaactgt atcaaggaag 480
tgagcagatt caccacaggtg gccaaaggcct accaggaccg ctatcaggac ctgggggcct 540
acagttctgc caggaagtgc ctggccaaac agaggcagag gatgctgcaa gagagaaaag 600
ctgcaaaaaga ggccgcccgt gccacctcct gaggcagctg tgggtgcccc tgctgtgtgg 660
ctctgtatga ctgttgctga aatataaagc cctgcaacct gaaaaaaaaa aaaaaaaaaa 720
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaattn 756

<210> 197

<211> 1471

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (458)

<223> n equals a,t,g, or c

<400> 197

ttggctgctc ctgacctcag caaaccaaga gggatcact gggatacatc agattggatg 60
ccaagcgttc ctctgccgga catacaagag ttccccaact atgaggtgat tgatgagcag 120
acaccctgt actcagcaga tccaaacgcc atcgatacgg actattaccc tggaggctac 180
gacatcgaag gtgattttcc tccaccccca gaagacttcc ccgcagctga tgagctacca 240
ccgttaccgc ccgaattcag caatcagttt gaatccatcc accctcctag agacatgcct 300
gccgcgggta gcttggggtc ttcatcaaga aaccggcaga ggttcaactt gaatcagtat 360
ttgcccatt tttatccctt cgatatgtct gaacctcaaa caaaaggcac tgggtgagaat 420
agtacttgta gagaacccca tgccccttac ccgccagngt atcaaagaca cttcgaggcg 480
cccgtgtctg agagcatgcc catgtctgtg tacgcctcca ccgcctcctg ctctgacgtg 540
tcagcctgct gcgaagtggg gtccgaggtc atgatgagtg actatgagag cggggacgac 600
ggccacttcg aagaggtgac gatcccgcgc ctggattccc agcagcacac ggaagtctga 660
ctctcaactc ccccaaaagt gcctgacttt agtgaaccta gaggtgatgt gagtaatccg 720
cgctgttctt tgcagcagtg cttccaagct ttttttggtg agccgaatgg gcatggctgc 780
gctggatcct gcgcctctgg acgtgctagc catttccagt gtcccaacta ctgtcatcgt 840
gagggttttca tcggctgtgc catttcccaa cgtcttttgg gatttacatc tgtctgtgtt 900
aaaataatca aacgaaaaat cagtcctgtg ttgtcagcat gattcatgta tttatataga 960
tttgattatt ttaattttcc tgtctctttt ttttgtaa at tttatgtaca gatttgattt 1020
ttcatagttt taactagatt tccaagatat tttgtgcatt tgtttcaact gaattttggg 1080
ggtggtagtg ccattatcta gcaccctgat tttttttttt tactataacc agggtttcat 1140
tctgtctttt tccactgaag tgtgacattt tgttagtaca tttcagtgta gtcattcatt 1200
tctagctgta cataggatga aggagagatc agatacatga acatgtctta catgggttgc 1260
tgtattttaga attataaaca tttttcatta ttggaaagtg taacggggac cttctgcata 1320
cctgttttaga accaaaacca ccatgacaca gtttttatag tgtctgtata tttgtgatgc 1380
aatggctctg taaaggtttt taatgaaaac taccattagc cagtctttct tactgacaat 1440
aaattattaa taaaataaaa aaaaaaaaaa a 1471

<210> 198

<211> 692

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (43)

<223> n equals a,t,g, or c

<400> 198

```
gtgaattggt aattcgacct cccctatagg gccgaatttg ggntaccggg cccccccctt 60
agtgcggcct gctcttgga gttcaggctc ggttgctctt tgggagccat ggagagtgc 120
ttttatctgc gttactacgt ggggcacaa ggcgaagttcg gccacgagtt cctggagttt 180
gagtttcgac cggacgggaa gttaagatat gccacaaca gcaattacaa gaatgatgtc 240
atgatcagaa aagaggctta tgtacataaa agcgtgatgg aggaactgaa gagaataatt 300
gacgacagtg aaattaccaa agaggatgat gcattgtggc ctccctcctga ccgagtgggc 360
cggcaggagc ttgaaatcgt cattggagat gaacacattt cttttacaac atcaaaaatt 420
ggttccctta ttgatgtcaa tcaatccaag gatccagaag gcttacgagt attttattat 480
cttggtccagg acctgaagtg tttggtcttc agtcttattg gattacactt caagattaaa 540
ccaatctaga ctgaatattg gtgtggacat ggggggtggg tgggagtaga aaattttgtg 600
tatatcaggg cagtattttt ttatgaacta taaatgattg tctttaataa atatgtgata 660
aaatccaatt tttattattt tataaagacc tg 692
```

<210> 199

<211> 1573

<212> DNA

<213> Homo sapiens

<400> 199

```
ctcgtgccga attcggcacg agccggcgcc agctacgccg ctgccgctgt cactatggcc 60
cattacaaag ccgccgactc gaagcgtgag cagttccgga ggtacttgga gaagtcgggg 120
gtgctggaca cgctgaccaa ggtgttggtg gccttatatg aagaaccaga gaaacctaac 180
agtgttttgg atttttttaa gcatcactta ggagctgcta ctccagaaaa tccagaaata 240
gagctgcttc gcctagaact ggccgaaatg aaagagaagt atgaagctat tgtagaagaa 300
aataaaaaac tgaaagcaaa gcttgctcag tatgaaccac ctcaggagga gaagcgtgct 360
gaataggatt cttctcagtt tgaaagacaa tgaaaaatgg ttttgtatga cttgaatagt 420
ttgtatagta tataatcttt tctgaacaga tgctatagaa ctcttttaat atgtttaatt 480
cacctatcac actctgttaa aaacacatag aatcatcaat aaaaactcaa tataactttc 540
tttgggtctt aaagcaggag aatccaaagt aaatcctgaa caaaacctaa acacagccat 600
ctaactcatt accttaaaag acattctgkt tattagctctg attaggaatg atggcactgg 660
ttgtatttta gccaaagacag ttttagcatgg agctattcct tgggtgcagtt caggatatga 720
acacaggtag agtcattctt tgaaggtgac actgttctgt atattcccta taggcagctg 780
gagagatctg tgtgacacaa gatgcttttg tacgggttcc catgaatctt ctgctcttgt 840
ttgtgtgaca tggaacaaat aacttctttg ccaccacttt gccttagata actgtgtgtg 900
tgtgtgccag tttgaactct gacaccacat tttccttcta tgcaatcatg cctgtctgat 960
aatcttgcat tgctttcctc tgagctttag tgggtcctag ttgcacactg gcctttctgt 1020
gctgtttttc aatttgccct ataatagcag ttaccctgat tgtaatttat gtaactttta 1080
acaggatcac actgtacccc ctgectgcct tatttgctta ctgagcacag gacagaggca 1140
atatacaact ctgggttcac acacaagctg agatgagaag aggaatgagc catatatttg 1200
ggaaaatcat agtttgtagg tataattata tagtgctttt ctccctcaaa gtatttttct 1260
agccttgaat tcattttatc ttcattatcc ctgtgaagta ggtgggacaa gtataagggg 1320
aagagggttg ctgaattttt aggccaaaga ctgatattaa tacaatcac tcactaactg 1380
```

tagagccttg ggcattatca gtgaactact ctgagattta ctgtcttcat ctgtttaatg 1440
agtagaatgt ccgtgatgcc tacctcacag gggtgtgtg aggggtcaaat gagaatgtat 1500
gtgaaagatt tgtaaatggg aaagcactat attcttggtta aaaaaaaaaa aaaaaaaaaa 1560
aaaaaaaaaa aaa 1573

<210> 200

<211> 2742

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (26)

<223> n equals a,t,g, or c

<400> 200

gggtcgaccc acgcgtccgc ccacgntccg tgaatgggtga actccagaaa gccattgact 60
tattcacaga tgccatcaag ctgaatcctc gcttgcccat tttgtatgcc aagagggcca 120
gtgtcttcgt caaattacag aagccaaatg ctgccatccg agactgtgac agagccattg 180
aaataaatcc tgattcagct cagccttaca agtggcgggg gaaagcacac agacttctag 240
gccactggga agaagcagcc catgatcttg cccttgccctg taaattggat tatgatgaag 300
atgctagtgc aatgctgaaa gaagttcaac ctagggcaca gaaaattgca gaacatcgga 360
gaaagtatga gcgaaaacgt gaagagcgag agatcaaaga aagaatagaa cgagttaaga 420
aggctcgaga agagcatgag agagcccaga gggaggaaga agccagacga cagtcaggag 480
ctcagtatgg ctcttttcca ggtggctttc ctgggggaat gcctggtaat tttcccgag 540
gaatgcctgg aatgggaggg ggcatgcctg gaatggctgg aatgcctgga ctcaatgaaa 600
ttcttagtga tccagaggtt cttgcagcca tgcaggatcc agaagttatg gtggctttcc 660
aggatgtggc tcagaaccca gcaaataatg caaaatacca gagcaaccca aaggttatga 720
atctcatcag taaattgtca gccaaatttg gaggtcaagc gtaatgtcct tctgataaat 780
aaagcccttg ctgaaggaaa agcaacctag atcaccttat ggatgtcgca ataatacaaa 840
ccagtgtacc tctgaccttc tcatcaagag agctgggggtg ctttgaagat aatccctacc 900
cctctccccc aaatgcagct gaagcatttt acagtgggtt gccattaggg tattcattca 960
gataatgttt tcctactagg aattacaaac tttaaactact ttttaaactt tcaaaatatt 1020
taaaacaaat ttaaaggggc tgtaattctt tataattttt tttactaatc attttggatt 1080
tttttctttg aattattggc agggaatata cttatgtatg gaagattact gctctgagt 1140
aaataaaaagt tattagtgcg aggcaaacat aactcatttg aggataaagt ttgtgttgga 1200
tatgtggttc ctgatgcatt ttgacttgtc tttttaaatg ctttatcttt ttctttaaag 1260
atatttttca ataaaactaa ttgggaccac ccgtattttca gtaggacctg ggtagggatt 1320
ggaagtactt ggcagggcag cagcaatctt gctgtgtttg atataacatg catccttggg 1380
caggttgccc ttaaatctta cactgtgttg aagggatgtt ttttttgtaa tgctgcagta 1440
gagttggagt acttagttct cttgttgtcc agtatatcta ataagtgtt ttcatattat 1500
ttccacgtaa gggaaataag gtagtacttt tctttttata tttctatgct taaaattctc 1560
tttcctagtc aaaaattgcc caaatctgtg tttgctttct gcttgctaca tttgtctccc 1620
ttacttttct tgagctaaag acaggctttt tccaccggca tcatcactgc tatcatcatt 1680
aacagcgtaa ttatacaagc atatttaatg ctgagtttaa tttaatatgt aatacatatg 1740
gtaattgtag ggtaataccc acaacaactg tagtttctta cttggccaag agaattgcta 1800
tttaagtgtt agacttccat tctggcaaaa tcttgcccta tcagaagaca ttggaaagag 1860
ggattccctt tgggtgtttg tcttctactt agaaaaacct attgcagtta gtttatcttg 1920
tagtattcat ctttgtattc tgaagataag gtttgaatta aattgatata cacagagggg 1980
aaccgatttt ttttatccaa tgtgaattat aaatgagata atccacagtt attcattgtg 2040
gagttgttga gactatgaaa gactcattgt ctttgtattc agctcttaaa tagtgtaact 2100

```
atatccccac ctctgcttgc tttctttccc tcccctccaa tgataaagaa aatgataaat 2160
tttctgttgt gcattcaatt cttatttttaa ataagactaa gtataggcat tgtacctgac 2220
attgctacgt ttctaccagt gtttcaattt aaagtgctag tgtttaaaaa cattttcaag 2280
ggataaggcc ttctgtactt tgcttatttg aagaatcagt ggtaggagca gtgaagtaaa 2340
ttctatggag tacatttcta aaataaccaca tttctgaaat cataaataag tttattcagg 2400
ttctaaccct ttgctgtaca caagcagaca gaaatgcac tgttacataa atgagaaaaa 2460
gctattatgc tgatggagca tgctttttta atccttttaa aacactcacc atataaactt 2520
gcatttgagc ttgtgtgttc ttttggttaat gtgtagagtt ctcctttctc gaaattgcca 2580
gtgtgtactt ggcttaactc aagaacagtt tcttctggat tccttatttg atttatttaa 2640
cctaattata ttctaataat gcaaatatta ccataagtgg gtaaaagtaa aattcctctt 2700
ctgaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaggggggg gg 2742
```

<210> 201

<211> 1417

<212> DNA

<213> Homo sapiens

<400> 201

```
atgaagactt gtcaagagga aaaattgatg ggacacttgg gtgttgatt gtatgagtat 60
ttgggtgaag agtaccctga agtattgggc agcattcttg gagcactgaa ggccattgta 120
aatgtcatag gtatgcataa gatgactcca ccaattaaag atctgctgcc tagactcacc 180
cccatcttaa agaacagaca tgaaaaagta caagagaatt gtattgatct tgttggtcgt 240
attgctgaca ggggagctga atatgtatct gcaagagagt ggatgaggat ttgctttgag 300
cttttagagc tcttaaaagc ccacaaaaag gctattcgta gagccacagt caacacattt 360
ggttatattg caaaggccat tggccctcat gatgtattgg ctacacttct gaacaacctc 420
aaagttcaag aaaggcagaa cagagtttgt accactgtag caatagctat tgttgagaaa 480
acatgttcac cctttacagt actccctgcc ttaatgaatg aatacagagt tcctgaactg 540
aatgttcaaa atggagtgtt aaaatcgctt tccttcttgt ttgaatatat tggtgaaatg 600
ggaaaagact acatttatgc cgtaacaccg ttacttgaag atgctttaat ggatagagac 660
cttgtagaca gacagacggc tagtgcagtg gtacagcaca tgtcacttgg ggtttatgga 720
tttggttggt aagattcgct gaatcacttg ttgaactatg tatggcccaa tgtrtttgag 780
acatctcttc atgtaattca ggcagttatg ggagccctag agggcctgag agttgctatt 840
ggaccatgta gaatgttgca atattgttta cagggtctgt ttcaccagc ccggaaagtc 900
agagatgtat attggaaaat ttacaactcc atctacattg gttcccagga cgctctcata 960
gcacattacc caagaatcta caacgatgat aagaacacct atattcgta tgaacttgac 1020
tatatcttat aattttattg tttattttgt gtttaatgca cagctacttc acaccttaaa 1080
cttgctttga tttggtgatg taaactttta aacattgcag atcagtgtag aactggtcac 1140
agaggaagag ctagaaatcc agtagcatga tttttaaata acctgtcttt gtttttgatg 1200
ttaaacagta aatgccagta gtgaccaaga acacagtgat tatatacact atactggagg 1260
gatttcattt ttaattcatc tttatgaaga tttagaactc attccttggt tttaaaggga 1320
atgtttaatt gagaaataaa catttggtga caaatgcta aaaaaaaaaa aaaaaaaaaa 1380
ctcgaggggg gcccgtacct aattcgccgt atagtga 1417
```

<210> 202

<211> 1512

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (855)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1512)

<223> n equals a,t,g, or c

<400> 202

```
cttagaagac cctatgcaag gtacaacggc ttgtaccggt ccggaattcg cgggcgcgkc 60
aacttggaaga gtactcgggt tcgtgaactt cccggaggcg caatgagctg cattaacctg 120
cccactgtgc tgccyggctc cccagcaag acccgggggc agatccagggt gattctcggg 180
ccgatgttct caggaaaaag cacagagttg atgagacgcg tccgtcgtt ccagattgct 240
cagtacaagt gcctggtgat caagtatgcc aaagacactc gctacagcag cagcttctgc 300
acacatgacc ggaacacccat ggaggcrtcg cccgcctgcc tgctccgaga cgtggccccag 360
gaggcccttg gcgtggctgt cataggcatc gacgaggggc agtttttccc tgacatcgtg 420
gagttctgcg aggccatggc caacgccggg aagaccgtaa ttgtggctgc actggatggg 480
accttycaga ggaagccatt tggggccatc ctgaacctgg tgccgctggc cgagagcgtg 540
gtgaagctga cggcgggtgt catggagtgc ttccgggaag ccgcctatac caagaggctc 600
ggcacagaga aggaggtcga ggtgattggg ggagcagaca agtaccactc cgtgtgtcgg 660
ctctgctact tcaagaaggc ctcaggccag cctgccgggc cggacaacaa agagaactgc 720
ccagtgccag gaaagccagg ggaagccgtg gctgccagga agctctttgc cccacagcag 780
attctgcaat gcagccctgc caactgaggg acctgcgagg gccgcccgtt cccttcctgc 840
cactgccgcc tactnggacg ctgccctgca tgctgcccag ccactccagg aggaagtcgg 900
gaggcgtgga gggtgaccac accttggcct tctgggaact ctcttttggt tggctgcccc 960
acctgccgca tgctccctcc tctcctaccc actggtctgc ttaaagcttc cctctcagct 1020
gctgggacga tcgcccaggc tggagctggc cccgcttgggt ggcctgggat ctggcacact 1080
ccctctcctt ggggtgaggg acagagcccc acgctgttga catcagcctg cttcttcccc 1140
tctgcggctt tcaactgctga gtttctgttc tccctgggaa gcctgtgcca gcaccttga 1200
gccttggccc aactgaggc ttaggcctct ctgcctggga tgggctccca ccctccccctg 1260
aggatggcct ggattcacgc cctcttgttt ccttttkggc tcaaagccct tcctacctct 1320
ggtgatgggt tccacaggaa caacagcatc tttaccaag atgggtggca ccaaccttgc 1380
tgggacttgg atcccagggg cttatctctt caagtgtgga gagggcaggg tccacgcctc 1440
tgctgtagct tatgaaatta actaattgaa aattcaaaaa aaaaaaaaaa aaaaaaaaaa 1500
aaaaaaaaaa an 1512
```

<210> 203

<211> 419

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (384)

<223> n equals a,t,g, or c

<400> 203

```
cctgggcaga gccggtggca agggcctccc ctgccgctgt gccaggcagg cagtgcctaaa 60
tccggggagc ctggagctgg ggggaaggcc ggggacagcc cggccctgcc cctcccccg 120
ctgggagccc agcaacttct gaggaagttt tggcacccat ggcgtggcgg tgccccagga 180
tgggcagggt cccgctggcc tgggtgcttg cgctgtgcgg ctggggcgtg catggcccc 240
aggggcacgc argctgaaga aagtcccttc gtgggcaacc cagggaatat cacaggtgcc 300
```


cggggactca cgggcaccct tcggtgtcag ctccaggttc agggagagcc ccccgaggta 360
cattggcttc gggatggaca gatnctggag ctgcgagaca gcacccagac ccagggtgtt 419

<210> 204
<211> 2833
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (2802)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (2822)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (2831)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (2832)
<223> n equals a,t,g, or c

<400> 204
gctcgtgccg aattcggcac gaggggaagtg aagccccagc gagcggctgc agcggggccg 60
tgaggagcag ccagcgggag gcggcggcga gtcggtgagc agctgggaag agcagaaccg 120
gggcgagca cctgcaggcg cgggcggcgg cccaccatg gcgattcgca agaaaagcac 180
caagagcccc ccagtgtga gccacgaatt cgtcctgcag aatcacgcgg acatcgtctc 240
ctgtgtggcg atggtcttcc tgctggggct catgtttgag ataacggcaa aagcttctat 300
catttttgtt actcttcagt acaatgtcac cctcccagca acagaagaac aagctactga 360
atcagtgtcc ctttattact atggcatcaa agatttggct actgttttct tctacatgct 420
agtggcgata attattcatg ccgtaattca agagtatatg ttggataaaa ttaacaggcg 480
aatgcacttc tccaaaacaa aacacagcaa gttaaatgaa tctggtcagc ttagtgcggt 540
ctaccttttt gcctgtgttt ggggcacatt cattctcatc tctgaaaact acatctcaga 600
cccaactatc ttatggaggg cttatcccca taacctgatg acatttcaaa tgaagttttt 660
ctacatatca cagctggctt actggcttca tgcttttcct gaactctact tccagaaaac 720
caaaaaagaa gatattcctc gtcagcttgt ctacattggt ctttacctct tccacattgc 780
tgagacttac cttttgaact tgaatcatct aggacttgtt cttctggtgc tacattattt 840
tgttgaattt cttttccaca tttcccgcct gttttatttt agcaatgaaa agtatcagaa 900
aggattttct ctgtgggcag ttctttttgt tttgggaaga cttctgactt taattctttc 960
agtactgact gttggttttg gccttgcaag agcagaaaat cagaagctgg atttcagtac 1020
tggaacttc aatgtgttag ctgttagaatt cgctgttctg gcatccattt gcgttactca 1080
ggcatttatg atgtggaagt tcattaattt tcagcttcga aggtggaggg aacattctgc 1140
ttttcaggca ccagctgtga agaagaaacc aacagtaact aaaggcagat cttctaaaaa 1200
aggaacagaa aatggtgtga atggaacatt aacttcaaat gtagcagact ctccccgaa 1260
taaaaaagag aaatcttcat aatgaattat aaactaattg attaatgtcc ccaaagaaat 1320

```
ctgcttttcta ctatatcttt cagcattaga gattttttctg ttcttgaaaa tacagtctgt 1380
gctcttttgat ttttgctatt gtacgggtttc atgcattttt tttaaagggca tttgagggga 1440
ggattattgac tatgaatgaa aaaaatattt tagcttagac taagctacct gccttcaaaa 1500
tagtttaggg accaccacca tatttttattt tgtttttatt tttgaacatt tttctaataga 1560
tttggagaga aaactattta caaaaattcc acatatcagt gatacaattt cttgctgtca 1620
ccaattttttt ataatagcag agtggcctgt tctaagaagg ccatattttt taagtatatct 1680
ttcagggttaa catggaaata ctataaagtt ggatgtcaaa ctttaatatg ttttcagtgt 1740
tctctaattt tttggaattt ttgtagactt tacacctgga aaaaaagatt tgtaaaatca 1800
ccggaacaat tgtgtgcttt attttatagg tagtggttat tagtattaca tccccatttt 1860
aaaaacaaaa acataataat ggttacaaca cgtggagttt tactaacata catattaaat 1920
caaagtatat tcttaaaagt acttgtgaag taaaatcttt cttgtgcatt ttcaataactt 1980
gtaaactgga aatcagaaaa tatttactat gaacaggaaa atctgacata tagccctttt 2040
tgatatgttt attaataatg attcttaatg gggctcataa taagtttaat atgcacagca 2100
tcttagaaaa gtttaacctg caaacacttt taaaacataa tgcctacttg atttatatct 2160
ataaaaagac tgacaggtaa ttatatgttg aaaacattta atgcactaac tttaaagaaa 2220
ttgaaaattc aggtggataa atagtcttac aaaagacaat gtgctttatg ttatacctat 2280
agctttggtc ccatctttaa ttgagaaaca tttatctgta taaaacatat ttttggataa 2340
atatatatat atatatttgt atcgctacag aaaggctcta aaaagcattt gaggaaaata 2400
tttggttccc ttttctataa tcatccttta agattcttat agctacattt ggtttattca 2460
tcataattac agtatatata ttgttctttt cagtgttcac atcttgttcc ccatttctca 2520
cttgtgtcac cagctgtttg tgccattttt agtgtaaaaag ttgcagacct attagatctg 2580
cagtttaagt tgccatgctg ctaggaaatt gtcctttttc tttctagctg ttaacctact 2640
tcctggaaaa agtagtagct ctctgtagca ttatggagtt tcagtggaac caaatttttg 2700
ccattaaaaa ctggcattat actgaactat acattgagaa atcaatcaaa ataaaaattt 2760
ttactttcac aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa anaaaaaaaaa aaaaaaaaaa 2820
anaaaaaaaaa nna 2833
```

<210> 205

<211> 5830

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (5584)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (5585)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (5821)

<223> n equals a,t,g, or c

<400> 205

```
cctgcgagtt cagggctcct gccgctctcc aggagcaacc tctactccgg acgcacaggc 60
attccccgcg cccctccagc cctcgccgcc ctcgccaccg ctccccggccg ccgcgctccg 120
gtacacacag gatccctgct gggcaccaac agctccacca tggggctggc ctggggacta 180
```

```

ggcgtcctgt tcctgatgca tgtgtgtggc accaaccgca ttccagagtc tggcggagac 240
aacagcgtgt ttgacatctt tgaactcacc ggggccgccc gcaaggggtc tgggcgcccga 300
ctggtgaagg gccccgaccc ttccagccca gctttccgca tcgaggatgc caacctgac 360
ccccctgtgc ctgatgacaa gttccaagac ctggtggatg ctgtgcgggc agaaaagggt 420
ttcctccttc tggcatccct gaggcagatg aagaagaccc ggggcacgct gctggccctg 480
gagcggaaaag accactctgg ccaggtcttc agcgtggtgt ccaatggcaa ggccggcacc 540
ctggacctca gccctgaccgt ccaaggaaaag cagcacgtgg tgtctgtgga agaagctctc 600
ctggcaaccg gccagtggaa gagcatcacc ctgtttgtgc aggaagacag ggcccagctg 660
tacatcgact gtgaaaagat ggagaatgct gagttggacg tccccatcca aagcgtcttc 720
accagagacc tggccagcat cgccagactc cgcatcgcaa agggggcgct caatgacaat 780
ttccaggggg tgctgcagaa tgtgaggttt gtctttggaa ccacaccaga agacatcctc 840
aggaacaaaag gctgtctccag ctctaccagt gtctcctca cccttgacaa caacgtggtg 900
aatggttcca gccctgccat ccgcactaac tacattggcc acaagacaaa ggacttgcaa 960
gccatctgcg gcatctcctg tgatgagctg tccagcatgg tcctggaaact caggggcctg 1020
cgaccattg tgaccacgct gcaggacagc atccgcaaag tgactgaaga gaacaaagag 1080
ttggccaatg agctgaggcg gcctccccta tgctatcaca acggagttca gtacagaaat 1140
aacgaggaat ggactgttga tagctgcact gactgtcact gtcagaactc agttaccatc 1200
tgcaaaaagg tgtcctgccc catcatgccc tgtccaatg ccacagttcc tgatggagaa 1260
tgctgtcctc gctgttggcc cagcgactct gcggacgatg gctggtctcc atggtccgag 1320
tggacctcct gttctacgag ctgtggcaat ggaattcagc agcgcggccg ctctgcgat 1380
agcgtcaac aaccgatgtg agggctcctc ggtccagaca cggacctgcc acattcagga 1440
gtgtgacaag agatttaaac aggatggtgg ctggagccac tgggtccccgt ggtcatcttg 1500
ttctgtgaca tgtggtgatg gtgtgatcac aaggatccgg ctctgcaact ctcccagccc 1560
ccagatgaac gggaaacctt gtgaaggcga acgcgggaga ccaaagcctg caagaaagac 1620
gcctgcccc acaatggagg ctggggtcct tggtcaccat gggacatctg ttctgtcacc 1680
tgtggaggag gggtagagaa acgtagtcgt ctctgcaaca accccrcacc ccagtttggg 1740
ggcaaggact gcgttggtga tgtaacagaa aaccagatct gcaacaagca ggactgtcca 1800
attgatggat gcctgtccaa tcctgtctt gccggcgctga agtgtactag ctacctgat 1860
ggcagctgga aatgtggtgc ttgtccccct ggttacagtg gaaatggcat ccagtgcaca 1920
gatgttgatg agtgcaaaga agtgctgat gcctgtctca accacaatgg agagcaccgg 1980
tgtgagaaca cggaccccg ctacaactgc ctgccctgcc cccacgctt caccggctca 2040
cagcccttcg gccagggtgt cgaacatgcc acggccaaca aacagggtgt caagccccgt 2100
aaccctgca cggatgggac ccacgactgc aacaagaacg ccaagtgcaa ctacctgggc 2160
cactatagcg accccatgta ccgctgcgag tgcaagcctg gctacgctgg caatggcatc 2220
atctgcgggg aggacacaga cctggatggc tggcccaatg agaacctggt gtgcgtggcc 2280
aatgcgactt accactgcaa aaaggataat tgccccaacc ttcccaactc agggcaggaa 2340
gactatgaca aggatggaat tggatgatgcc tgtgatgatg acgatgacaa tgataaaatt 2400
ccagatgaca gggacaactg tccattccat tacaacctcag ctacgtatga ctatgacaga 2460
gatgatgtgg gagaccgctg tgacaactgt ccctacaacc acaacctcaga tcaggcagac 2520
acagacaaca atggggaagg agacgctgt gctgcagaca ttgatggaga cggatcctc 2580
aatgaacggg acaactgcc aacgtcttac aatgtggacc agagagacac tgatatggat 2640
ggggttgagg atcagtgtga caattgcccc ttggaacaca atccggatca gctggactct 2700
gactcagacc gcattggaga tacctgtgac aacaatcagg atattgatga agatggccac 2760
cagaacaatc tggacaactg tccctatgtg ccaatgcca accaggctga ccatgacaaa 2820
gatggcaagg gagatgcctg tgaccacgat gatgacaacg atggcattcc tgatgacaag 2880
gacaactgca gactcgtgcc caatcccagc cagaaggact ctgacggcga tggtcgaggt 2940
gatgcctgca aagatgattt tgaccatgac agtgtgccag acatcgatga catctgtcct 3000
gagaatgttg acatcagtga gaccgatttc cgccgattcc agatgattcc tctggacccc 3060
aaagggacat cccaaaatga ccctaactgg gttgtacgcc atcagggtaa agaactcgtc 3120
cagactgtca actgtgatcc tggactcgct gtaggttatg atgagtttaa tgctgtggac 3180
ttcagtggca ccttcttcat caacaccgaa agggacgatg actatgctgg atttgtctt 3240

```

```
ggctaccagt ccagcagccg cttttatgtt gtgatgtgga agcaagtcac ccagtcctac 3300
tgggacacca accccacgag ggctcagga tactcgggcc tttctgtgaa agttgtaaac 3360
tccaccacag ggcctggcga gcacctgcgg aacgccctgt ggcacacagg aracaccct 3420
ggccagggtgc gcacctgtg gcatgacct cgtcacatag gctggaaaga tttcacccgc 3480
tacagatggc gtctcagcca caggccaaag acgggtttca ttagagtggg gatgtatgaa 3540
gggaagaaaa tcatggctga ctgaggacct atctatgata aaacctatgc tgggtggtaga 3600
ctagggttgt ttgtcttctc tcaagaaatg gtgttcttct ctgacctgaa atacgaatgt 3660
agagatccct aatcatcaaa ttgttgattg aaagactgat cataaaccaa tgctggtatt 3720
gcaccttctg gaactatggg cttgagaaaa cccccaggat cacttctcct tggcttcctt 3780
cttttctgtg cttgcatcag tgtggactcc tagaacgtgc gacctgcctc aagaaaatgc 3840
agttttcaaa aacagactca gcattcagcc tccaatgaat aagacatctt ccaagcatat 3900
aaacaattgc tttggtttcc ttttgaaaaa gcatctactt gcttcagttg ggaagggtgc 3960
cattccactc tgcctttgtc acagagcagg gtgctattgt gaggccatct ctgagcagt 4020
gactcaaaag cattttcagg catgtcagag aaggaggagc tcactagaat tagcaaaaca 4080
aaccacctg acatctcct tcaggaacac ggggagcaga ggccaaagca ctaaggggag 4140
ggcgcatacc cgagcagatt gtatgaagaa aatatggagg aactgttaca tgttcggtac 4200
taagtcattt tcaggggatt gaaagactat tgctggattt catgatgctg actggcgtta 4260
sctgattaac ccatgtaaat aggcacttaa atagaagcag gaaagggaga caaagactgg 4320
cttctggact tcctccctga tccccaccct tactcatcac ctgcagtggc cagaattagg 4380
gaatcagaat caaaccagt taaggcagt ctggctgcca ttgcctggc acattgaaat 4440
tgggtggctt attctagat tagcttgtgc agatgtagca ggaaaatagg aaaacctacc 4500
atctcagtga gcaccagct cctcccaaag gaggggcagc cgtgcttata tttttatgg 4560
tacaatggca caaaattatt atcaacctaa ctaaaacatt cttttctct tttttcctga 4620
attatcatgg agttttctaa ttctctctt tggaaatgtag atttttttta aatgctttac 4680
gatgtaaaat atttattttt tacttattct ggaagatctg gctgaaggat tattcatgga 4740
acaggaagaa gcgtaaagac tatccatgtc atctttgttg agagtcttcg tgactgtaa 4800
attgtaaata cagattattt attaactctg ttctgcctgg aaatttaggc ttcatacgg 4860
aagtgtttga gagcaagtag ttgacattta tcagcaaadc tcttgcaaga acagcacaag 4920
gaaaatcagt ctaataagct gctctgcccc ttgtgctcag agtggtatgt atgggattct 4980
tttttctct gttttatctt ttcaagtggg attagttggg tatccatttg caaatgtttt 5040
aaattgcaaa gaaagccatg aggtcttcaa tactgtttta ccccatccct tgtgcatatt 5100
tccagggaga aggaaagcat atacactttt ttctttcatt tttccaaaag agaaaaaat 5160
gacaaaaggt gaaacttaca tacaatatt acctcatttg ttgtgtgact gagtaaagaa 5220
tttttgatc aagcggaaaag agtttaagt tctaacaac ttaaagctac tgtagtacct 5280
aaaaagtcag tgtgtgacat agcataaaaa ctctgcagag aagtattccc aataaggaaa 5340
tagcattgaa atgttaaata caatttctga aagttatgtt tttttctat catctgggtat 5400
accattgctt tattttttata aattattttc tcattgccat tggaatagat atctcagatt 5460
gtgtagatat gctattttaa taatttatca ggaaatactg cctgtagagt tagtatttct 5520
atttttatat aatgtttgca cactgaattg aagaattgtt ggttttttct tttttttgt 5580
ttgnntttt ttttttttt ttttgctttt gacctcccat ttttactatt tgccaatacc 5640
tttttctagg aatgtgcttt tttttgtaca catttttatc cattttacat tctaaagcag 5700
tgtaagttgt atattactgt ttcttatgta caaggaacaa caataaatca tatggaaat 5760
tatattttaa aaaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaasgg gggggcccc 5820
nagggggccc 5830
```

<210> 206

<211> 755

<212> DNA

<213> Hom sapiens

<220>

<221> misc feature

<222> (368)

<223> n equals a,t,g, or c

<400> 206

```
tcgacccacg cgtccgccag tcgcacatct cagacacctc cgtgggtgtc aagctggaca 60
acagccggga cctgaacatg gactgcatca ttgccgagat taaggcacag tatgacgaca 120
ttgtcaccgg cagccggggc gaggccgagt cctgggtaccg cagcaagtgt gaggagatga 180
aggccacggg gatcaggcac ggggagaccc tgcgccgcac caaggaggag atcaacgagc 240
tgaaccgcat gatccagagg ctgacggccg aggtggagaa tgccaagtgc cagaactcca 300
agctggaggc cgcggtgggc cagtctgagc agcagggtga ggcggccctc agtgatgcc 360
gctgcaanct ggccgagctg gagggcgccc tgcagaaggc caagcaggac atggcctgcc 420
tgatcaggga gtaccaggag gtgatgaact ccaagctggg cctggacatc gagatcgcca 480
cctacaggcg cctgctggag ggcgaggagc agaggctatg tgaaggcatt ggggctgtga 540
atgtctgtgt cagcagctyc cggggcgggg tcgtgtgcgg ggacctctgc gtgtcaggct 600
yccggccagt gactgcagtg tctgcagcgc tycgtgcaac ggaacgtgg cggtagacac 660
cggcctgtgt gcgccctgcg gcaattgaca ccamctgcgg aggggggttct gcggcggtgg 720
ctyctgtggt atcaagyttc ccccccttt gggggg 755
```

<210> 207

<211> 1996

<212> DNA

<213> Homo sapiens

<400> 207

```
gggtcgaccc acgcgtccga tttagagccg ggtaggggag cgcagcrgcc agatacctca 60
gcgctacctg gcggaactgg atttctctcc cgcctgccgg cctgcctgcc acagccggac 120
tccgccactc cggtagcctc atggctgcaa cctgtgagat tagcaacatt tttagcaact 180
acttcagtgc gatgtacagc tcggaggact ccaccctggc ctctgttccc cctgctgcca 240
cctttggggc cgatgacttg gtactgaccc tgagcaaccc ccagatgtca ttggagggtga 300
cagagaaggc cagctgggtg ggggaacagc ccagttctg gtcgaagacg caggttcttg 360
actggaacag ctaccaagtg gagaagaaca agtacgacgc aagcgccatt gacttctcac 420
gatgtgacat ggatggcgcc accctctgca attgtgccct tgaggagctg cgtctgggtct 480
ttgggcctct gggggaccaa ctccatgcc agctgcgaga cctcacttcc agctcttctg 540
atgagctcag ttggatcatt gagctgctgg agaaggatgg catggccttc caggaggccc 600
tagaccaggg gccctttgac cagggcagcc cctttgcca ggagctgctg gacgacggtc 660
agcaagccag cccctaccac cccggcagct gtggcgagg agccccctcc ccyggcagct 720
ctgacgtctc caccgcaggg actggtgctt ctcgagctc ccactcctca gactccggtg 780
gaagtgacgt ggacctggat cccactgatg gcaagctctt ccccgagcat ggttttcgtg 840
actgcaagaa gggggatccc aagcacggga agcggaacg aggcgggcc cgaaagctga 900
gcaaagagta ctgggactgt ctcgagggca agaagagcaa gcacgcgcc agaggcacc 960
acctgtggga gttcatccgg gacatcctca tccaccggga gctcaacgag ggcctcatga 1020
agtgggagaa tcggcatgaa ggcgtcttca agttcctgcg ctccgaggct gtggcccaac 1080
tatggggcca aaagaaaaag aacagcaaca tgacctacga gaagctgagc cgggccatga 1140
ggtactacta caaacgggag atcctggaac ggggtgatgg ccggcgactc gtctacaagt 1200
ttggcaaaaa ctcaagcggc tggaaggagg aagaggttct ccagagtcgg aactgagggt 1260
tggaactata cccgggacca aactcacgga ccactcgagg cctgcaaacc ttcctgggag 1320
gacaggcagg ccagatggcc cctccactgg ggaatgctcc cagctgtgct gtggagagaa 1380
gctgatgttt tgggtgattg tcagccatcg tcctgggact cggagactat ggcctcgctc 1440
ccccaccctc ctcttggaat tacaagccct ggggtttgaa gctgacttta tagctgcaag 1500
tgtatctcct tttatctggt gcctcctcaa acccagctct agacactaaa tgcagacaac 1560
```

```

accttctctcc tgcagacacc tggactgagc caaggaggcc tggggaggcc ctaggggagc 1620
accgtgatgg agaggacaga gcaggggctc cagcaccttc tttctggact ggcgttcacc 1680
tccctgctca gtgcttgggc tccacgggca ggggtcagag cactccctaa tttatgtgct 1740
atataaatat gtcagatgta catagagatc tattttttct aaaacattcc cctccccact 1800
cctctccac agagtgtggt actgttccag gccctccagt gggctgatgc tgggaccctt 1860
aggatggggc tcccagctcc tttctcctgt gaatggaggc agagacctcc aataaagtgc 1920
cttctgggct ttttctaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1980
aaaaaaaaaa ctcgag                                     1996

```

<210> 208

<211> 1668

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1505)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1565)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1598)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1620)

<223> n equals a,t,g, or c

<400> 208

```

cacactgctc gcttcggata ctccaggcgt ctcccgttgc ggccgctccc tgccttagag 60
gccagccttg gacacttgct gcccctttcc agcccggatt ctgggatcct tccctctgag 120
ccaacatctg ggctcctgct tcgacaccac cccaaggctt cctaccttgc gtgcctggag 180
tctgccccag gggcccttgt cctgggccat ggccmagaag ggggtccttg ggcctgggca 240
gctgggggct gtggccattc tgccttatct tggattactc cggtcgggga caggagcgga 300
aggggcagaa gctycctgcg gtgtggcccc ccaagcacgc atcacagggt gcagcagtgc 360
agtcgccggt cagtggccct ggcaggtcag catcacctat gaaggcgtcc atgtgtgtgg 420
tggtctctc gtgtctgagc agtgggtgct gtcagctgct cactgcttcc ccagcgagca 480
ccacaaggaa gcctatgagg tcaagctggg ggcccaccag ctgactcct actccgagga 540
cgccaaggtc agcaccctga aggacatcat cccccacccc agctacctcc aggagggctc 600
ccagggcgac attgcactcc tccaactcag cagacccatc accttctccc gctacatccg 660
gcccatctgc ctccctgcag ccaacgcctc cttccccaac ggccctccact gcactgtcac 720
tggctgggggt catgtggccc cctcagttag cctcctgacg cccaagccac tgcagcaact 780
cgagggtgct ctgatcagtc gtgagacgtg gtaactgcct gtacaacatc gacgccaagc 840
ctgaggagcc gcactttgtc caagaggaca tgggtgtgtg tggctatgtg gaggggggca 900
aggacgcctg ccagggtgac tctgggggcc cactctcctg ccctgtggag ggtctctggg 960

```

```
acctgacggg cattgtgagc tggggagatg cctgtggggc ccgcaacagg cctggtgtgt 1020
acactctggc ctccagctat gcctcctgga tccaaagcaa ggtgacagaa ctccagcctc 1080
gtgtggtgcc ccaaaccagc gagtcccagc ccgacagcaa cctctgtggc agccacctgg 1140
ccttcagctc tgccccagcc cagggccttg tgaggcccat ccttttcctg cctctggggc 1200
tggctctggg cctcctctcc ccatggctca gcgagcactg agctggccct acttccagga 1260
tggatgcatc aactcaagg acaggagcct ggtccttccc tgatggcctt tggaccagc 1320
gcctgacttg agccactcct tccttcagga ctctgcggga ggctggggcc ccatcttgat 1380
ctttgagccc attcttctgg gtgtgctttt tgggaccatc actgagagtc aggagtttta 1440
ctgcctgtag caatggccag agcctctggc ccctcamcca ccatggacca gcccattggs 1500
cgagntcctg gggagtcctg ggaccttggg tatgaaaatg agccctgggt tcccacctgt 1560
ttctngaaga ctgcttcccc gcccgccttc ccagactnga tgagcacatt ttttttgcen 1620
ttccctgtg tttttgggtt gggcaacttt ttggaagttt gaggagaa 1668
```

<210> 209

<211> 2250

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (23)

<223> n equals a,t,g, or c

<400> 209

```
gctttaagca aaaaggtcct tangtgacac tatagaaggt acgcctgcag gtaccgggtcc 60
ggaattcgcg gccgcgtcga cattcgccgc cgcagcagcc gccgcccccg ggagccgccg 120
ggaccctcgc gtcgtcgccg ccgccgccgc ccagatcccc gcaccatgcc gtcggagaag 180
accttcaagc agcgcgcgac cttcgaacaa agagtagaag atgtccgact tattcgagag 240
cagcatccaa ccaaaatccc ggtgataata gaacgataca agggtgagaa gcagcttcct 300
gttctggata aaacaaagtt cttgtacct gaccatgtca acatgagtga gctcatcaag 360
ataattagaa ggcgcttaca gctcaatgct aatcaggcct tcttcctggt ggtgaacgga 420
cacagcatgg tcagcgtctc cacaccaatc tcagaggtgt atgagagtga gaaagatgaa 480
gatggattcc tgtacatggt ctatgcctcc caggagacgt tcgggatgaa attgtcagt 540
taaaaccaga aaaaatgcat ctcttctaga attgtttaa cccttacc aa ggaaaaaaaa 600
ggggtgttac caactgagat cgatcagttc atccaatcac agatcatgaa acagtagtgt 660
tcccacctag gagtgtagg aagttgtgtt tgtgtttcaa gcagaaaaac tgagctccaa 720
gtgagcacat tcagctttgg aaactatatt atttaagtga ggctagcttg ttttcaaatt 780
ttaaagttt aaaaataaaa tactttgcat tctaagttgc caataaaata gaccttcaag 840
ttattttaat gctcttttct cactaatagg aacttgtaat tccagcagta atttaaaggc 900
tttcagagag accctgagtc ttctcttcag gttcacagaa cccgccgcct ttttgggtag 960
aagttttcta ctacgctaga gagatctccc taagaggatc tttaggcctg agttgtgaag 1020
cgcaaccccc gcaaaacgca tttgccatca cagttggcac aaacgcaggg taaacgggct 1080
gtgtgagaaa acggccctga ctgtaaactg ctgaaggctc ctgactccta agagaaccac 1140
acccaaagtc ctactcttg caggggtaga catctctggt ttggtttgtt ctctagatag 1200
ttacacacat aaagacacca ctcaaaagga aacttgaata atttataatt ttgatcgagt 1260
ttcttaaaaag accctggaga aagagtggca tttcttctgt ttcaggtttt gtctgagttc 1320
aaactagtgc ctgtgttgtt acggaagca gcagtgtacc agtgtcactc tggagtacag 1380
cgggagaaac acaaaatagt ataactgaaa acattaacat tcagacacac tcccttctgc 1440
cttccggctt aaagctgtgg atgatccacg tttttgtttt tttaatgtta aatgtgtaac 1500
tcagtattac tgaaaaggta cccacatttt gaatagtagt tatcactctt aggtcagaca 1560
gccatcagaa ttctccaca ccaagtgcac gtcagttgtg gagaaaacat agcaaaaaa 1620
```

```
gccgtacgct ctttacagat actaatgtca agagttaaac ctcctcaggt tcaacctgtg 1680
ataaaaagact agtgcttccc agtacttgca tgggggtcac tattttatagt tttcttgga 1740
gtatcacagg aaaatcacia ttacaccact ttagacccta tgtgtagcag gtcacaactt 1800
acccttggtgt gtttagatgt gtatgaaata cctgtatacg ttagtgaaag ctgtttactg 1860
taacggggaa aaccagattc tttgcatctg ggccctctac tgattgttaa aggagttcct 1920
gtcacctgct cccccacccc ccgcatgcgt ctgtccactt ggctaacttt taatatgtgt 1980
atTTTTacat tatgtatatt cttaactgga ctgtctcgtt tagactgtat acatcatatc 2040
tgacattatt gtaactaccg tgtgatcagt aagattcctg taagaaatac tgctttttaa 2100
gaaaaaaaaa aacatgctga ggggtgacct atatcccatg tgagtggcca ctttatttat 2160
aggatcttta aaacattttt aatgaactaa gttgaataaa ggcacaatta aaaactgtca 2220
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2250
```

<210> 210

<211> 838

<212> DNA

<213> Homo sapiens

<400> 210

```
ggcgggccta cgtgctccgc ccgctgtgag cctgtccggc ccccgcccg cccggagcaa 60
cccgcgagct tacaccggct tctctctgtc ctccagccgc gcgcccgcac cgcggtcatg 120
ctgggcgcgc ctctccgcgc ctgcgctgtg gccgcaacca cccgggcccga ccctcgaggc 180
ctcctgcaact ccgcccggac ccccgggccc gccgtggcta tccagtcagt tcgctgctat 240
tcccatgggt cacaggagac agatgaggag tttgatgctc gctgggtaac atacttcaac 300
aagccagata tagatgcctg ggaattgcgt aaagggataa acacacttgt tacctatgat 360
atggttccag agcccaaaat cattgatgct gctttgcggg catgcagacg gttaaatgat 420
tttgctagta cagttcgtat cctagagggt gttaaggaca aagcaggacc tcataaggaa 480
atctaccctt atgtcatcca ggaacttaga ccaactttaa atgaactggg aatctccact 540
ccggagggaac tgggccttga caaagtgtaa accgcatgga tgggcttccc caaggattta 600
ttgacattgc tacttgagtg tgaacagtta cctggaaata ctgatgataa catattacct 660
tatttgaaca agttttcctt tattgagtac caagccatgt aatggtaact tggactttaa 720
taaaaggga atgagtttga actgaaaaaa aaaaaaaaaa aaactcatat agactgaagc 780
gcggtgatta aataatgaaa gagttcgacg cggccgggaa tttaggagggt aaatatcc 838
```

<210> 211

<211> 1213

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1206)

<223> n equals a,t,g, or c

<400> 211

```
gcccacgcgt ccggcaggaa ccgcggctgc tggacaagag ggggtgcggtg gatactgacc 60
tttgctccgg cctcgtcgtg aagacacagc gcatctcccc gctgtaggct tcctcccaca 120
gaaccgcgtt cgggcctcag agcgtctggt gagatgctgt tgccgctgct gctgctgcta 180
cccatgtgct gggcgcgtga ggtcaagagg ccccggggcg tctccctcac caatcatcac 240
ttctacgatg agtccaagcc ttccacctgc ctggacgggt cggccaccat cccatttgat 300
caggtaacg atgactattg cgactgcaaa gatggctctg acgagccagg cacggctgcc 360
tgtcctaata gcagcttcca ctgcaccaac actggctata agcccctgta tatcccctcc 420
```



```
aaccgggtca acgatggtgt ttgtgactgc tgcgatggaa cagacgagta caacagcggc 480
gtcatctgtg agaacacctg caaagagaag ggccgtaagg agagagagtc cctgcagcag 540
atggccgagg tcaccgcga agggttccgt ctgaagaaga tccttattga ggactggaag 600
aaggcacggg aggagaagca gaaaaagctc attgagctac aggctgggaa gaagtctctg 660
gaagaccagg tggagatgct gcggacagtg aaggagggaag ctgagaagcc agagagagag 720
gccaaagagc agcaccagaa gctgtgggaa gagcagctgg ctgctgcca ggcccaacag 780
gagcaggagc tggcggctga tgccttcaag gagctggatg atgacatgga cgggacggtc 840
tcggtgactg agctgcagac tcaccgcgag ctggacacag atggggatgg ggcgttgtca 900
gaagcgggaag ctacagccct yctcagtggg gacacacaga cagacgccac ctctttctac 960
gaccgcgtct ggggcccagg cggggctggt ccacattccc aggcccaac agccttcaaa 1020
gatgggtaaa ggagcttgcc ctccctgggc cccccacctt ggtgactcgc cccaccaccc 1080
ccagccctgt cctgccacc cctcctagtg gggactagtg aatgacttga cctgtgacct 1140
caatacaata aatgtgatcc cccacccaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1200
aaaaanaaaa aaa 1213
```

<210> 212

<211> 969

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (922)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (955)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (958)

<223> n equals a,t,g, or c

<400> 212

```
ccactgcttc ccatgggcag tcttgctcat atcctgggag ctccctgttct ttcagaccca 60
aaggaaccca agcagaaatc tttgtatgta tatgtatgaa gaggttgtct gtttttagga 120
gttgatgta aaagctaagg aaaccttttc ttttgaaga tcagtataaa catgctgctt 180
ttggtaaaat tcttttgagc cattttcatc taaatataac ttctgtttca ttttttttc 240
taaataaac tcagagttta atgagggcct ttcacatgga acaagctttt gagagggcct 300
gtgttgctga agttttcgcc cttggattgc tggggtgata ttggtgacaa actctgtagg 360
gaaggactgg gaacctgtca atcttttttc tttggttggg tggattgggc agggaatagc 420
tgacttgatt tggtataagt ttggaagggt atagtttggt cacattcttc attgatcaca 480
cttttaggga ttcttgaaga aaagggaagc aaaacataca cacacacccc cacccaatct 540
aacagcgtat tcaagcagat tccacgaatc ctcgcccgag gtttaataaa ggcaggaaaag 600
ttcccttccc tgctcacaca caacgaaaac atggtggcca aagtggatga ggtgaagtcc 660
acaatcaagt tccaaatgaa gaaggtgtta tgtctggctg tagctgttgg tcacgtgaag 720
atgacagacg atgagcttgt gtataacatt cacctggctg tcaacttctt ggtgtcattg 780
ctcaagaaaa actggcagaa tgtccgggcc ttatatatca agagcaccat gggcaagccc 840
cagcgcctat attaaggcac atttgaataa attctattac cagttaaaaa aaaaaaaaaa 900
```

aaaaaaaaa aaaaaaaaaa anaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaanccncg 960
gggggggggg 969

<210> 213

<211> 1694

<212> DNA

<213> Homo sapiens

<400> 213

ggcacgagag aagaggcggg agtggacctg gtcagcccta cccactgac cccaccggac 60
ccaggcgcgg cctccgccac agccacagcc cctgcccctg ctgcggcgag gcgaggcgag 120
gcgatggcca aggtgtcggg gctgaacgtg gcggctcctg agaaccggag ccctttccac 180
agccccctcc ggttcgagat cagcttcgag tgcagtgaag ccctggcgga cgacctggag 240
tggaagatca tttatgttgg ctcggtgag agtgaggaat ttgatcagat cctagactcg 300
gtgctggtgg gccctgtgcc agcagggaga cacatgtttg tctttcaggc cgacgcccc 360
aaccatccc tcatcccaga gactgatgcc gtgggtgtga ctgtggtcct catcacctgc 420
acctaccatg gacaggagtt catccgagtg ggctactacg tcaacaacga gtacctcaac 480
cctgagctgc gtgagaacct gcccatgaag ccagatttct cccagctcca gcggaacatc 540
ttggcctcga acccccggtt gaccgcttc catatcaact gggacaacaa catggacagg 600
ctggaggcca tagagaccca ggaccctcc ctgggctgag gcctccact caactgcact 660
cctatcaagg gcttggggct ccctggctgc atccctggcc tcctccctga gaactccatg 720
gactgcatct aactgcagga acccagagtg tcccagcacg ccgggagggg caaccaggcc 780
tcccagcgag tcctgcaggg cccatctaga ggaytttggg ggccatcagc ttgcaatcca 840
ggtctgtcaa actcagcccy taggaaagaa caggccttgg gtytycccta gtctggcca 900
gaaggatgat ctgccttttc ctctacaggc ctataagaag caggtaactc agttctaaat 960
tctgacttgt gttcttttcg tcttcataaa ttctaactaa ggccactgtg ccactgtgca 1020
cccttgagta ccattgatcc aaagctttcc cacagacctc cctggcccac ctagaggctt 1080
tcttggtcag tgcctgtcaa ggytccagtc ctgctgagcc aaaggctttg tcattccttt 1140
ctcttcctgt acatctgagc agaccactc cagctttctg gtgtcacagg cgggaatgtt 1200
agttagtagg tagacttaga tcccatttct gtctgtctcc caggaagatt cttaggtcct 1260
cttcaatcca gcagcccctc ccagagggtg gatcagcagg atgctgagga accatgttgc 1320
ctttcctgtc aatcacagcc accttcctgt tatctcctaa atggatctgg cttttcctgg 1380
aggctgccat ggttggaaga tggatcaga gggcctgcct gggcagtctg tctccgggcc 1440
agggtcaggg accctctkcc tctggcagcc ttaacctgtc ctctgctagg accagggtga 1500
tttcaagcca gggaagcaac tgggaccctg aaaactgtcc ctcccagcc cgctccccct 1560
ctctgtgccc tgggtcccctt gctgccatgt ggatgctgtt gtgattgctg tttgtatatt 1620
atcaaaatgt ttttatatta aaaatgtttg gtctgaaaat taaaagcact tcatttgaaa 1680
aaaaaaaaa aaaa 1694

<210> 214

<211> 1210

<212> DNA

<213> Homo sapiens

<400> 214

ggcacgagcc gcggcgctct ctccsggacg ctgaggggcc cgaggagacc gtgaggctct 60
ggcctgcagc tcgcgccgcc atggacgctg ccgaggtcga attcctcgcc gagaaggagc 120
tggttaccat tatcccaaac ttcagtcctg acaagatcta cctcatcggg ggggacctgg 180
ggccttttaa cctgtgttta cccgtggaag tgcccctgtg gctggcgatt aacctgaaac 240
aaagacagaa atgtgcgctg ctccctccag agtggtgga tgtagaaaag ttggagaaga 300
tgagggatca tgaacgaaag gaagaaactt ttacccaat gccagccct tactacatgg 360

```

aacttacgaa gctcctgtta aatcatgctt cagacaacat cccgaaggca gacgaaatcc 420
ggaccctggg caaggatatg tgggacactc gtatagccaa actccgagtg tctgctgaca 480
gctttgtgag acagcaggag gcacatgcc aactggataa cttgaccttg atggagatca 540
acaccagcgg gactttcctc acacaagcgc tcaaccacat gtacaaactc cgcacgaacc 600
tccagcctct ggagagtact cagtctcagg acttctagag aaaggcctgg tgcaggcggc 660
ttgctggggg atgtgagcgc tcaggacgtg atgaggtact cgtgggtctg gagctctaga 720
aacacttctg atgcatgaaa aatgtgtgat ggtgcaagga atggattcag gatgttgttg 780
gagaaacaag tttgtgatta gtccttaaaa cttagctccc tgggacattc ttcaattcca 840
catctgtttc tagaaaccag ccctttttcc cccactttt gagaaataaa aaagccttag 900
gtaaataagt cattctccct agcagagcca cttgggtctc ctgcatggaa gccatcacac 960
ttgggcagggt gttcagtgc tggtaggtgt agatacagca ggagtggcca tgtggtccac 1020
ggctttttac cccttcttga tcctsatctt ttgggctgaa tttagactct ctacagagag 1080
tggtcacag agaaggatgg cagatggtgc agccaacaat gctgaccggg gcttatcctc 1140
taagccctga tccacaataa aaatggaccc aactcaaaaa aaagagagag agagagagag 1200
agagagagac                                     1210

```

<210> 215

<211> 1776

<212> DNA

<213> Homo sapiens

<400> 215

```

agctggcccg gacgccagaa aatgttccac gtgggatacc ctgctgggk ttcactgtag 60
tagctgcact aggtgattct tggagcgggc ctgagagaca aggacatgtg gatcccagtg 120
gtcgggcttc ctggcggtt gaggtctctc gccttggcgg gcgctggctg cttttgcatt 180
ttagggtctg aagcggcgac gcgaaagcat ttgccggcga ggaaccactg tgggctctct 240
gactcctctc cgcagctgtg gcccgaaccg gatttcagga atccgccaaag gaaggcgtct 300
aaggccagct tagactttta gcgttacgta accgatcgga gattggctga gaccctggcg 360
caaatctatt tgggaaaacc aagtagacct ccacacctac tgctggagtg caatccaggt 420
cctggaatcc tgactcaggc attacttgaa gctggtgcca aagtgggtgc gctcgaaagt 480
gacaaaactt ttattccaca tttggagtcc ttaggaaaaa atctggatgg aaaactacga 540
gtgattcact gtgacttctt taaactagat cctagaagtg gtggagtaat aaaaccacct 600
gctatgtctt ctcgagggtt ctttaagaat ttgggaatag aagcagttcc ttggacagca 660
gacatccctt taaaagtagt tggaatgttc ccaagtagag gtgagaaaag ggcacttttg 720
aaactcgcat atgacttgta ttcctgtact tctatatata aatttgagc aatagaagta 780
aatatgttta ttggtgaaaa agaattccag aaactaatgg cagatccygg aaatccagac 840
ttgtatcatg tattaagtgt tatctggcaa ttagcttgtg agattaaggt tctgcacatg 900
gagccttggg catcatttga tatatacacc cggaagggtc cgctggaaaa cccaaagcgt 960
agggaattat tagaccaatt acaacaaaag ctgtatctta ttcaaatgat tcctcgtcaa 1020
aatattatta ccaagaactt aacacctatg aactataata tattttttca cttgttaaag 1080
cactgttttg ggaggcgcag sgccactgta atagaccact tacgttcatt gactccactt 1140
gatgcgagag atatattgat gcaaatagga aaacaggagg atgagaaagt agttaacatg 1200
caccctcaag acttcaaaac actttttgaa actatagagc gttccaaaga ttgtgcttat 1260
aatggctgt atgatgaaac cctggaagat aggtagcaac tagactgtcg tttttgggtg 1320
agcggttcat ttatttgga actatgacat gaaaaccaa tttgaaaact cacatcctt 1380
cagcagaagg taactgttct tgtcttgac aagccaggca gatcatttct cctaagctga 1440
tatcattggc ttattggatg aaacagtgtc tgctatttta ttcacaattg aataaaatga 1500
aaacttcaat taattgtgga tttgatcaga ttgaattcgt tttgtttcag attcctattt 1560
aaatatttca cttgtactgt tgctgatttt tgcacttct tgaagagcaa gagtctgtac 1620
attattaagc ttagaaagta agcaaaactg atttactggg ttgcctttca gtttgttgaa 1680
atgtattgtc aagtactgta caatgaaatt gtttaaattt taatatgatt taagcttttt 1740

```

agaaattaaa atatttttaa taagaaaaaa aaaaaa

1776

<210> 216

<211> 1418

<212> DNA

<213> Homo sapiens

<400> 216

```
agggtttctt ggataggctt gctgaagatg aaggggacag tgagccagag gccgttggac 60
agtccagggg agaagacaga agaagtagag aggcagggcc tggtagacagt atcagttagt 120
gccatacaga attgtgtatt caccagcatc atgaaacagt tgtggtcttt tgagttgac 180
ttggcagagt aaagggacgt gtcctggagc cattcctgaa tctccccctt tttgtgacag 240
ctctctccac cccccaaaa aataaaaaaa ccacaaaaaa caaaaaaca aaactaaggc 300
acttcactta gagactggag tcctgcttat aatcatgcat ataaccttta ctttgatgga 360
tctggccaga ggggtgttgg agcccagccc acccacatac cagtcaagct cttaggggag 420
cagaagaaaa gcaggaagaa tttaaatggt taattttttt tttaaattga cttttctagt 480
tattaaaagt tgcttgtttc agcagtgata ttgtataaag aacatcttgt aagatactcc 540
tgacatcttg ctttagcaca tgtacagtac agtttctatg ataagtgtgt tgctctaact 600
tccctggctt ctccttcagc ccatccactc tcctctagag cagttgggtt ggaggctcat 660
tgaggcaagc agcaacattg gagggggagc agggcagtgct tgtgtctgct gcctcccatg 720
cccgttctga cctcagcctt ggaactcctc aagaacctga agattccagt ggtcagtgtc 780
gggtgggggt gggaggagag agcggcagag aagctctgag agccccttcc cccacaacaa 840
atctagctct agttgttata tttaggcaaa actttgtagt cttctttccc ttttatgatg 900
gattttgata aaagtacaaa acagggtttt tcttttttat cacctttgaa tttggaaatt 960
ttgagcacc cagctcttct gtacctattt aaagtccacc aaggggactg cagctcctag 1020
aacatgagaa tcaagcctct taatttttaa ctgcggaatg tggcctctgc ttctccgtc 1080
ctcctgcca aggacgacga ggattgctcc agggctgctg ggtagtttac cgtcccttct 1140
ataggcatgg agttggcact gacatcacag cttcataacc ccaccaccgc cagcttcccc 1200
tgctccttac atccagtctg ttcttgttca tagtgagaat cctgtgttcc cacttcagt 1260
acacctgaat tgtttgttgt tgttttttt ttttattgtc ttcaaagagg aagggcccca 1320
ttaaagggtg aacttgtaat aaattggaat ttcaaataaa cctcatgtac ttgtgtttat 1380
aaagaagaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaa 1418
```

<210> 217

<211> 2200

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (2188)

<223> n equals a,t,g, or c

<400> 217

```
gggcacgagg ccagttcct gttcccagac tgaggccag ccccttcgc ccgtttccat 60
cacgagtgcc gccagcatgt ctgacaaact gccctacaaa gtcgccgaca tcggcctggc 120
tgcttgggga cgcaaggccc tggacattgc tgagaacgag atgccgggcc tgatgcgtat 180
gcgggagcgg tactcgccct ccaagccact gaaggcgcc cgcacgctg gctgctgca 240
catgaccgtg gagacggccg tcctcattga gacctcgtc accctgggtg ctgaggtgca 300
gtggtccagc tgcaacatct tctccacca ggaccatgcg gcggctgcca ttgccaaggc 360
tggcattccg gtgtatgcct ggaaggcgca aacggacgag ggtacacctgt ggtgcattga 420
```

```

gcagaccctg tacttcaagg acgggcccct caacatgatt ctggacgacg ggggacgacct 480
caccaacctc atccacacca agtaccgcga gcttctgccca ggcatccgag gcatctctga 540
ggagaccacg actgggggtcc acaacctcta caagatgatg gccaatggga tcctcaaggt 600
gcctgccatc aatgtcaatg actccgtcac caagagcaag ttgacaacc tctatggctg 660
ccgggaggtcc ctcatagatg gcatcaagcg ggccacagat gtgatgattg ccggcaaggt 720
agcgggtggtg gcaggctatg gtgatgtggg caagggctgt gccaggccc tgcgggggtt 780
cggagcccgc gtcatacatca ccgagattga ccccatcaac gcatgcagg ctgccatgga 840
gggctatgag gtgaccacca tggatgaggg ctgtcaggag ggcaacatct ttgtcaccac 900
cacaggctgt attgacatca tccttgggcg gcactttgag cagatgaagg atgatgccat 960
tgtgtgtaac attggacact ttgacgtgga gatcgatgtc aagtggctca acgagaacgc 1020
cgtggagaag gtgaacatca agccgcagg gtgacgggtat cgggtgaaga atgggcgccg 1080
catcatcctg ctggccgagg gtcggctggt caacctgggt tgtgccatgg gccaccccag 1140
cttcgtgatg agtaactcct tcaccaacca ggtgatggcg cagatcgagc tgtggacca 1200
tccagacaag taccctgttg ggggtcattt cctgcccagg aagctggatg aggcagtggc 1260
tgaagcccac ctgggcaagc tgaatgtgaa gttgaccaag ctaactgaga agcaagccca 1320
gtacctgggc atgtcctgtg atggcccctt caagccggat cactaccgct actgagagcc 1380
aggtctgcgt ttcaccctcc agctgctgtc cttgcccagg cccacctct cctccctaag 1440
agctaattgc accaactttg tgattgggtt gtcagtgtcc cccatcgact ctctggggct 1500
gatcacttag tttttggcct ctgctgcagc cgtcatactg ttccaaatgt ggcagcggga 1560
acaggtacc ctcttcaagc cccggtcagt atggaggtcc cagccacagg gaaccatgag 1620
ctcagtggtc ttggaacagc tcactaagtc agtccttctt tagcctggaa gtcagtagtg 1680
gagtcacaaa gcccatgtgt tttgccatct aggccttcac ctggtctgtg gacttatacc 1740
tgtgtgcttg gtttacaggt ccagtgggtt ttcagcccat gacagatgag aaggggctat 1800
attgaagggc aaagaggaac tgttgtttga attttctga gagcctggct tagtgctggg 1860
ccttctctta aacctcatta caatgaggtt agtactttta gtccctgtt tacaggggtt 1920
agaatagact gttaaggggc aactgagaaa gaacagagaa gtgacagcta ggggttgaga 1980
ggggccagaa aaacatgaat gcaggcagat ttcgtgaaat ctgccaccac ttataacca 2040
gatggttcct ttcacaaccc tgggtcaaaa agagaataat ttggcctata atgttaaaag 2100
aaagcaggaa ggtgggtaaa taaaaatctt ggtgcctgga aaaaaaaaaa aaaaaaaaaa 2160
aaaraaaaaa aaaaaaaaaa aaaaaaanaa aaaaaaaaaa 2200

```

<210> 218

<211> 1853

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (890)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1794)

<223> n equals a,t,g, or c

<400> 218

```

gggaaggagat catggcggat ggtcaggtgg cggaactgct gctccggcgg ctggaggcgt 60
ctgatggcgg cctggacagc gccgagttgg cggctgagct gggcatggag caccaggcgg 120
tgggtgggcgc cgtgaagagc cttcaggcgc tgggcgaggt catcgaggct gaacttcggt 180
ccaccaagca ctgggagctt actgcggagg gcgaggagat tgcccgggag ggcagccatg 240

```

```
aggcccggtgt gtttcgaagc attccccag agggcctggc ccagagcgag cttatgacgac 300
tgcccagtggt caaagtgggc ttcagcaagg ccatgtccaa caagtggatt cgggtggaca 360
agagtgcggc tgacgggccc cgggtgttcc gagtgggtga cagcatggag gatgaggtgc 420
agcggcggct ccagctggtc cgggggggac aggctgagaa gctgggggag aaggagagga 480
gcgagctgag gaagaggaag ctgttggtct aagtgactct gaagacctac tgggtgagca 540
aaggcagtgct ctttagtacc agcatctcca agcaagagac agagctgagc ccagagatga 600
tctccagtggt ctcttggtcg gaccggccct tcaagcccta caacttcttg gccacgggtg 660
tcctccccga cagcggccac cttcaccgcg tgctcaaggt ccgctcccag ttccgacaga 720
tcttcctgga gatgggggtt accgagatgc cgactgataa cttcattgag agctccttct 780
ggaactttga cgccctcttc cagccccagc agcaccacagc ccgtgaccag cacgacacct 840
tcttccttcg agatccagcg gagggcctgc agctcccaat ggactatgtn cagcgggtca 900
agcggaccca ctctcagggc ggctacggct cacaggggta caagtataac tggaagctgg 960
acgaggcccc gaaaaacctt ctgcgaaccc acaccacatc agccagcgcc cgtgcgctct 1020
accgccttgc ccagaagaag cccttcaactc cggctcaagta cttctccatc gaccgcgtat 1080
tccggaatga gacctggac gccacgcacc tggctgagtt ccaccagatc gagggcgtgg 1140
tggcggatca tggctcacc ttgggccacc tcatgggcgt tctgcgggag ttcttyacca 1200
agctgggtat cagcgaactc cgcttcaagc cagcctacaa cccatacaca gagcccagca 1260
tgaggtgtgt cagctaccac caaggcctga agaagtgggt ggaggtcggg aactcggggg 1320
tcttcctgcc agagatgctg ctgcccattg ggcttcccga gaacgtgtcg gtcattgcct 1380
ggggcctctc cctggagcgc ccaacgatga tcaaatatgg catcaacaat atccgggagc 1440
tggtagggcca caagtgaaac ctgcagatgg tgtatgacag tcccctgtgc cgcctggatg 1500
ccgagccgag gccccctccc acacaggagg ctgcgtgaca tgggccactc taggacaggt 1560
catcctcccc gagtccctgc tgctgcgtct ctttgcattc ctggccagtg acctgtatt 1620
tatgaggcct ctgtgaggcc agccccacc ttctcttttc ccacctgtcc caggaccaga 1680
atcccagggg cagaggactg ggtagcaggt tccttctgtt gtctgtgtg gtgtgtctac 1740
tgtgaggggt ggccctgagg agacctgtgg gccacctatt gtctaataaa gtgngcagtt 1800
gcccccaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 1853
```

<210> 219

<211> 1093

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1090)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1091)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1092)

<223> n equals a,t,g, or c

<400> 219

```
gcgtgcggcg tctacacccc gcgtgcgcc aggggctgcg ctgctatccc caccggggt 60
ccgagctgcc cctgcagcgc tggctcatgg cgagggcact tgtgagaagc gccgggacgc 120
```

```

cgagtatggc gccagcccgg agcagggtgc agacaatggc gatgaccact cagaaggagg 180
cctggtggag aaccacgtgg acagcaccat gaacatgttg ggcgggggag gcagtgctgg 240
ccggaagccc ctcaagtcgg gtatgaagga gctggccgtg ttccgggaga aggtcactga 300
gcagcaccgg cagatgggca aggggtggcaa gcatcacctt ggcctggagg agcccaagaa 360
gctgcgacca cccctgcca ggactccctg ccaacaggaa ctggaccagg tcctggagcg 420
gatctccacc atgcgccttc cggatgagcg gggccctctg gagcacctct actccctgca 480
catccccaac tgtgacaagc atggcctgta caacctcaaa cagtgcaga tgtctctgaa 540
cgggcagcgt ggggagtgtc ggtgtgtgaa cccaacacc ggggaagctga tccagggagc 600
ccccaccatc cggggggacc ccgagtgtca tctcttctac aatgagcagc aggaggctcg 660
cggggtgcac acccagcggg tgcaagtagc cgcagccagc cggtgccctg cggccctgcc 720
ccccgcccct ctccaaacac cggcagaaaa cggagagtgc ttgggtggtg ggtgctggag 780
gattttccag ttctgacaca cgtatttata ttggaaaga gaccagcacc gagctcggca 840
cctccccggc ctctctcttc ccagctgcag atgccacacc tgctccttct tgccttcccc 900
gggggaggaa gggggtgtg gtcggggagc tggggtacag gtttggggag ggggaagaga 960
aatttttatt tttgaacccc tgtgtccctt ttgcataaga ttaaaggaa gaaaagtaaa 1020
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1080
aaaaaaaaan nna 1093

```

<210> 220

<211> 2155

<212> DNA

<213> Homo sapiens

<400> 220

```

accacgcgt ccgctagaga gggattttmc ggtctcgttg gcagaggaac aaccaggaac 60
ttgggtcag tctccacccc acagtggggc ggatccgtcc cggataagac ccgctgtctg 120
gccctgagta ggggtgtgacc tccgcagccg cagaggagga gcgcascgg cctcgaagaa 180
cttctgcttg ggtggtgaa ctctgatctt gacctagagt catggccatg gcaaccaaag 240
gaggtactgt caaagctgct tcaggattca atgccatgga agatgccag accctgagga 300
aggccatgaa agggctcggc accgatgaag acgccattat tagcgtcctt gcctaccgca 360
acaccgcca gcgccaggag atcaggacag cctacaagag caccatcggc agggacttga 420
tagacgacct gaagtcagaa ctgagtggca acttcgagca ggtgattgtg gggatgatga 480
cgccacgggt gctgtatgac gtgcaagagc tgcgaagggc catgaaggga gccggcactg 540
atgagggtcg cctaattgag atcctggcct cccggacccc tgaggagatc cggcgcataa 600
gccaaacctt ccagcagcaa tatggacgga gccttgaaga tgacattcgc tctgacacat 660
cgttcatgtt ccagcgagtg ctggtgtctc tgtcagctgg tgggagggat gaaggaaatt 720
atctggacga tgctctcgtg agacaggatg ccaggacct gtatgaggct ggagagaaga 780
aatgggggac agatgagggt aaatttctaa ctgttctctg ttcccgaac cgaaatcacc 840
tgttgcatgt gtttgatgaa tacaaaagga tatcacagaa ggatattgaa cagagtatta 900
aatctgaaac atctggtagc tttgaagatg ctctgctggc tatagtaaag tgcagtagga 960
acaaatctgc atattttgct gaaaagctct ataaatcgat gaagggttg ggcaccgatg 1020
ataacaccct catcagagtg atggtttctc gagcagaaat tgacatgttg gatatccggg 1080
cacacttcaa gagactctat ggaaagtctc tgtactcgtt catcaagggt gacacatctg 1140
gagactacag gaaagtactg cttgttctct gtggaggaga tgattaaaat aaaaatccca 1200
gaaggacagg aggattctca acactttgaa ttttttaac ttcatttttc tacactgcta 1260
ttatcattat ctcaaatgc ttatttccaa ttaaacgcc tacagctgcc tcctagaata 1320
tagactgtct gtattattat tcacctataa tagtcatta tgatgcttta aagctgtact 1380
tgcatttcaa agcttataag atataaatg agattttaa gtagaaataa atatgtattc 1440
catgttttta aaagattact ttctactttg tgtttcacag acattgaata tattaaatta 1500
ttccatattt tcttttcagt gaaaaatttt ttaaatggaa gactgttcta aaatcacttt 1560
tttccctaatt ccaattttta gagtggctag tagtttcttc atttgaaatt gtaagcatcc 1620

```

```

ggtcagtaag aatgcccatc cagtttttcta tatttcatag tcaaagcctt gaaagcatct 1680
acaaatctct ttttttaggt tttgtccata gcatcagttg atccttacta agtttttcat 1740
gggagacttc cttcatcaca tcttatgttg aaatcacttt ctgtagtcaa agtataccaa 1800
aaccaattta tctgaactaa attctaaagt atggttatac aaaccatata catctgggta 1860
ccaaacataa atgctgaaca ttccatatta ttatagttaa tgtcttaatc cagcttgcaa 1920
gtgaatggaa aaaaaaataa gcttcaaact aggtattctg ggaatgatgt aatgctctga 1980
athtagtatg atataaagaa aacttttttg tgctaaaaat acttttttaa atcaattttg 2040
ttgattgtag taatttctat ttgcactgtg cctttcaact ccagaaacat tctgaagatg 2100
tacttggatt taattaaaaa gttcactttg taaaaaaaaa aaaawaaaaa aaaac      2155

```

<210> 221

<211> 1264

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (4)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (5)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (7)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (17)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (22)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (125)

<223> n equals a,t,g, or c

<400> 221

```

gtcnnngac agtgacngta cngtattccc gggtcgaccc acgcgtccgg taaaattctg 60
ggctctggta tcagttcctc ttcagtattg catggcatgg tttttaagaa ggaaaccgaa 120
gtgantgtaa catctgtcaa agatgcaaaa atagcagtgt actcttgtcc ttttgatggc 180
atgataacag aaactaaggg aacagtgttg ataaagactg ctgaagaatt gatgaatttt 240
agtaaggggag aagaaaacct catggatgca caagtcaaag ctattgctga tactgggtgca 300

```



```

aatgtcgtag taacaggtgg caaagtggca gacatggctc ttcattatgc aaataaatat 360
aatatcatgt tagtgaggct aaactcaaaa tgggatctcc gaagactttg taaaactgtt 420
ggtgctacag ctcttcctag attgacacct cctgtccttg aagaaatggg aactgtgac 480
agtgtttacc tctcagaagt tggagatact caggtggtgg tttttaagca tgaaaaggaa 540
gatggcgcca tttctaccat agtacttcga ggctctacag acaatctgat ggatgacata 600
gaaagggcag tagacgatgg tgttaatact ttcaaagttc ttacaaggga taaacgtctt 660
gtacccggag gtggagcaac agaaattgaa ttagccaaac agatcacatc atatggagag 720
acatgtcctg gacttgaaca gtatgctatt aagaagtttg ctgaggcatt tgaagctatt 780
ccccgcgcac tggcagaaaa ctctggagtt aaggccaatg aagtaatctc taaactttat 840
gcagtacatc aagaaggaaa taaaaacgtt ggattagata ttgaggctga agtccctgct 900
gtaaaggaca tgcgtgaagc tgggtattcta gatacttacc tgggaaaata ttgggctatc 960
aaactcgcta ctaatgctgc agtcaactga cttagagtgg atcagatcat catggcaaaa 1020
ccagctgggtg ggccaagcc tccaagtggg aagaaagact gggatgatga ccaaaatgat 1080
tgaaattggc ttaattttta ctgtaggtga aggctgtatt tgtagtagta ctcaagaatc 1140
acctgatgtt ttcttattct ccttaaatta agagttatct tgtgtttgta ttcttggtg 1200
gatgttataa taaacatatt gttactgtca aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1260
aaaa

```

<210> 222

<211> 2085

<212> DNA

<213> Homo sapiens

<400> 222

```

ccttgggaga ggaggaacag gcccttgggc agatgcaggc attaccagca gggagcagac 60
ttacctccga agatggagac aggtgactga gagctgcagg cctcctctgc tcttccaaac 120
acgtagcatt tgcacccctc caaagccatc tttgtaaagg aaaacgtatt tgtaattgaa 180
tccagaagaa tttagttaca catagacata actcttcaac cttaactatg gcaatacatt 240
tgtgtcttaa ctgttacata gcagtatcac cacttaccag gatccaaatc gaaataataa 300
aagctgtctc catagtttta aatcgaatag tgccatcatc acagtatatt agtcaaatag 360
aagcttcac agaaatgtat cccacataga gttttaagac ttggattctc ttctgccctt 420
gttaatctcc aactaattac tacagattga cacgttttta attagctgtc ctttgtaaga 480
agtcaggaaa tctgatgctg tgtccaaaat tatgcactgt ttgttgaagt agaaccagaa 540
atcctgacct cctgtttaat gacatcagtt tccccctctg agcaacagac tgcttgtctt 600
gctaggagag gaggatgggg ggctgagcac tcaggctgtc cattgaaacc ccttgtccat 660
gaataggggtc atactcctaa gactgatggg gtgttgatct tctaggacat cacttgttta 720
ttcagtgccc caaacacaga tttctcttct agcactttag agttgatcct tgaagtctct 780
cctggttcat tcaaatataa gctgtgtgag tctgggtggt ttctgtgatt ggtctaattg 840
gagctctttg aacagacaga tctgacagtg aatgactctc ccctgcttct ggcataactg 900
ctttgcctct gtctagtgtc caagcatctt agctgttcaa gaggagaggg cagcataact 960
tcctgaccac cgggtgcaga tatcagagca ttctggactc ctgagaggca gtggcctctt 1020
gagtgaacag gggaggccag tagatgcccc agatccagag ccgtggctgc aaatccagca 1080
ggaataagga gggacaacca cagcctcctc atccatgtgt catttccaag ggtttgctt 1140
gtgtctcagc tcattctggg cagcacgttt gtcttctgtc cctagagatt tgaaggattt 1200
tggaactctt tgaatgggtg actggacttg gctttacaga gttgggtgct tttttctctc 1260
tgcaattacc tgtcatagca ttttgtgtc accacgaagg atggtctctg ccttctcttg 1320
tcgggtgtat ccatctgaac ctaggaacac aaagtatatt ggctcaaac ggagaccag 1380
ggttgccagt tttccgtggg ccttcccctc ccttgaaatg tctttaatta cctccccttc 1440
atcgtcagc cactgtgtac ttctgttctt agcactgcca gggtcattga cttccatcta 1500
agcttgcatc aggaagatgt tccttctgtg atcattggta ctgaagccag aaaagctctc 1560
attcaggaac tctgaagagc aaaaaggagc aaacactaac tgctgagctg ggccatttga 1620

```

```

tctcctttca ccttgcattg ctgtcacagc accttgtatg atggcaggac aggctccagc 1680
agagagaact gcacagtgc cactgtatct ttcacgctct tccagggatc cctgtcccc 1740
gacattgaag agatctcatt caggccagag acacagagac cacatagccc agtgattaaa 1800
ccccggtttc actctggccc caggagtggg gcctggccac tcctgtttgg ttctcactgg 1860
gaggcccact ggccttgat catctcctca tgcacaccgc gagttttacc tgcttgcttg 1920
ctttcctgga ctgctgtttg caagaaagta actaaaacat gaaaagtaaa cctccagctt 1980
ccacagtata ttacctgccg ttgcatgcat ttgaaagtta rcctcctccc ttgccaccgt 2040
cttkgtggca gtagcggatg caagaatgga tgggagcttt ccgag 2085

```

<210> 223

<211> 2921

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1609)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2919)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2920)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2921)

<223> n equals a,t,g, or c

<400> 223

```

aaaaaaaaa aaaaaaagaa aaaaagaaag aaagaaaaga aaggagcagg gaggtagagc 60
cctctgtacc ctccatcacc agaaaaagct gaagaggggc tgagttaggag ggacagatgc 120
tggccagggc acagggttttg aagcataaaa ctcttgccct gtttgctgac tcgttgagac 180
agggtgcccc gaaggggata gacttccctg gggcgtgggg agagcaggag gctcaagtga 240
gatgctcttg gtgctagaaa ccgccctccc tcatgcctgg ggtctctccc tgccaggacc 300
ctgmcccgc taggctctgc cctgtctcat cccagcccaa cagcatggtg gtggaacacc 360
ccgagttcct caaggcaggg aaggagcctg gcctgcagat ctggcgtgtg gagaagtctg 420
atctggtgcc cgtgcccacc aacctttatg gagacttctt cacgggcgac gcctacgtca 480
tcctgaagac agtgcagctg aggaacggaa atctgcagta tgacctccac tactggctgg 540
gcaatgagtg cagccaggat gagagcggg cggccgccat ctttaccgtg cagctggatg 600
actacctgaa cggccggggc gtgcagcacc gtgagtccag ggcttcgagt cggccacctt 660
cctaggctac ttcaagtctg gcctgaagta caagaaagga ggtgtggcat caggattcaa 720
gcacgtggta cccaacgagg tgggtgtgca gagactcttc caggtaaaag ggcggcgtgt 780
ggtcctgtcc accgaggtac ctgtgtcctg ggagagcttc aacaatggcg actgcttcac 840
cctggacctg ggcaacaaca tccaccagtg gtgtggttcc aacagcaatc ggtatgaaag 900
actgaaggcc acacaggtgt ccaagggcat ccgggacaac gagcggagtg gccggggccc 960

```

```
agtgacacgtg tctgaggagg gcactgagcc cgaggcgatg ctccagggtgc tgggccccaa 1020
gccggctctg cctgcaggta ccgaggacac cgccaaggag gatgcggcca accgcaagct 1080
ggccaagctc tacaagggtc ccaatgggtg agggaccatg tccgtctccc tcgtggctga 1140
tgagaacccc ttcgcccagg gggccctgaa gtcagaggac tgcttcatcc tggaccacgg 1200
caaagatggg aaaatctttg tctggaaagg caagcaggca aacacggagg agaggaaggc 1260
tgccctcaaa acagcctctg acttcatcac caagatggac taccccaagc agactcaggt 1320
ctcggtcctt cctgaggggc gtgagacccc actgttcaag cagttcttca agaactggcg 1380
ggaccagac cagacagatg gcctgggctt gtcctacett tccagccata tcgccaacgt 1440
ggagcgggtg cccttcgacg ccgccaccct gcacacctcc actgccatgg ccgccagca 1500
cggcatggat gacgatggca caggccagaa acagatctgg agaatcgaag gttccaacaa 1560
ggtgcccggtg gaccctgccca catatggaca gttctatgga ggcgacagnt acatcattct 1620
gtacaactac cgccatgggtg gccgccaggg gcagataatc tataactggc agggtgccca 1680
gtctaccag gatgagggtc ctgcatctgc catcctgact gctcagctgg atgaggagct 1740
gggaggtacc cctgtccaga gccgtgtggt ccaaggcaag gagcccgccc acctcatgag 1800
cctgtttggt gggaagccca tgatcatcta caagggcggc acctcccgcg agggcgggcg 1860
gacagcccct gccagcacc ccctcttcca ggtccgcgcc aacagcgctg gagccacccg 1920
ggctgttgag gtattgccta aggtgggtgc actgaactcc aacgatgcct ttgttctgaa 1980
aaccacctca gcgcctacc tgtgggtggg tacaggagcc agcgaggcag agaagacggg 2040
ggcccaggag ctgctcaggg tgctgcgggc ccaacctgtg cagggtggcag aaggcagcga 2100
gccagatggc ttctgggagg ccctgggcgg gaaggctgcc taccgcacat cccacaggct 2160
gaaggacaag aagatggatg cccatcctcc tcgcctcttt gcctgctcca acaagattgg 2220
acgttttgtg atcgaagagg ttcctgggtg gctcatgcag gaagacctgg caacggatga 2280
cgtcatgctt ctggacacct gggaccaggc ctttgtctgg gttggaaagg attctcaaga 2340
agaagaaaag acagaagcct tgacttctgc taagcggtag atcgagacgg acccagccaa 2400
tcgggatcgg cggacgcccc tcaccgtggg gaagcaaggc tttgagcctc cctcctttgt 2460
gggctggttc cttggctggg atgatgatta ctggtctgtg gacccttgg acagggccat 2520
ggctgagctg gctgcctgag gaggggcagg gccacccat gtcaccggtc agtgcctttt 2580
ggaactgtcc ttccctcaaa gaggccttag agcgagcaga gcagctctgc tatgagtgtg 2640
tgtgtgtgtg tgtgtgtgtt cttttttttt tttttacagt atccaaaaat agccctgcaa 2700
aaattcagag tccttgcaaa attgtctaaa atgtcagtgt ttgggaaatt aaatccaata 2760
aaaaacatttt gaagtgtgwa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2820
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2880
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa n 2921
```

<210> 224

<211> 4395

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (325)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (4382)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (4391)

<223> n equals a,t,g, or c

<400> 224

```
ggtaagtcct ttattcatag cacagtcctc actaaacata aggagcttca tctggaagaa 60
gaagaagaag atgaagcagc agcagctgca gcagcagcag cccaggaagt tgaagccaat 120
gtccatgttc cacaagtagt tctgaggatt cagggcttaa acgtagaggc tgctgagcca 180
gaagtggagg ctgccgagcc agaagtggag gctgctgagc cagaagtgga ggctgctgag 240
ccaaacggag aggctgaagg gccagatgga gaggctgcag agccattgg agaggctgga 300
cagccaaatg gagaggccga gcagncaa atgaggccaga tgggtgcagg 360
attgaagacc cagaagaaag agctgaagag ccagagggca aaagctgaag agccagaggg 420
agatgccgac ggagccctga cgggtgtggga attgaagcac ccaggaagaa ggtgaagtat 480
caagagattc aggtagaaga accatactat gactgccatg aatgcacaga aaccttctact 540
tccagcacag cattcagtga acacctgaaa actcatgccg gcattgatcat atttgagcct 600
gcaaattgcct ttggggagtg ctcaggctac atcgaacgtg ccagcaccag cacaggtggt 660
gccaatgcaag ctgatgagaa gtacttcaaa tgtgacgtct gtgggcagct cttcaatgac 720
cgctgtctcc tcgccagaca ccagaatacc cagactggct gagggcatgg ggtaaagggt 780
agaaaaccct caccaggac ttgacctta ccaaaccaca gagaatccaa accaatccat 840
gataatgtca gtaggagact taaccttagt gtgttacaca cctgacttaa catctctaaa 900
ctcagattga aaagagaccg aatgtgcaga ttccacagtc ttaagcttcc ccttcagat 960
gtcagtgtct gcatgtggga aagccatagc acacatctta cctttccaag taatcagatt 1020
gagaaaaccc tatgagtatt ccagactaca gagtttgccc aaatcaactg taaatgacac 1080
ttgtgtaacg tatatatagt gtttcatgag gtgtatataa aatagcaaat tatgacagaa 1140
cagtgatcac atatatattg atttatatga tatacagtta cagtttactc tgcagaggta 1200
ccttacctgg tattctttga atttttttt tttttggagg aggaagagag caacaaattt 1260
gattatattt ttaagtgtct tagatcctga gaaagattta ttgtgcatta tttgaacctt 1320
gtcaatatct ttttgagtaa ttgtttgtt tcttaccctt aaatagtctt gtgaagctgt 1380
aggcatgata gataacatgg cttttactcc ttactgtttg aaaagataag tacttttagct 1440
tctttctgca gccatttcat ctgcrccaac actttggaac ctaatactgt gtaaggcttt 1500
acaatatacg gattggcttt ttgtgacca gattgattgg ttgccacatg ttatgtttgt 1560
tgaagtgggt ctcatgcaaa aatattacac atttgtgttc tgggtttttt tttttttta 1620
accaactcaa tatgtgtttg atgatatgga attgataaaa cccgaagctt ttccctgtaa 1680
atcttacatc tttgccttta aagaatgggt tacaaccatc actagatcac agtagtcct 1740
aatgaagggt gagaaccgta ggagaggctc tcatgctgta aataatgttg caggctaata 1800
accttcatc acttcctttg tgcgcttcct gccttaagtg acaagtagca acatggcttg 1860
ggteccctgt gcagcatcag cttatgctgc cacaagtcag tttkcaccct aggtgccag 1920
gagctagtat ccttagatct ttctatcgct aacttaattc tcttcgttat ttatctgacc 1980
ctctaaactcc atgtctaact tgcattaaaa aaaaaaaaaa tctttacagt caaccaagc 2040
ttaacatgga ctcaggttcc ccagcagcct taatttgttt tgtaacatc tttccttct 2100
ttttcagctc tcttagagta tttctgagtg ttgtgttcat ctaatcttag tattctttta 2160
attacaaatt gacctcacag cttgaggttt cttgtgtcct attctgtgga ctacctgtgc 2220
tcttttgctt cccctccctt cgcataataa ctatattaag aaattttttt tggccttgag 2280
ttggctggaa aaaaaatata aaatttaaaa aattttaaaa aaaagatttg caaaatgtaa 2340
gtgtagatca tttgaacaag caaaattaaa gtaccactg ggggaaatgt gtctgaatct 2400
tactctcttg gatctgcagg attagggctt ggaagtatgt caaagatgsa gggagtgtca 2460
aagtttagga agattgtaga gctgagagca agaagcagaa atgagtgagt caaagaaggg 2520
agtctaata catcaccaga tctaggaggg gagaggagac agacagaaga aaacaccaga 2580
ggcaagaact gtagaaggcc aggtttctga gaatgaattg agcggggtgt cctgagcagt 2640
ttggaaaagg agtttttgat ggtatgggtg aggtgagggc tggctgcata ggaaggactg 2700
aggttgaac ggacatcggg aaagctgagg ggcagtgagg tttactacat gggaaaagga 2760
ctcttgaaac gagaatcagt gttgatgtcr ggggtgaactt tgtgggtaca ttacttggtg 2820
```

ttaacattgt tggcagtggt agcccctttt cagaaagcaa cttgctgtaa gtcaggggtgt 2880
ccgttccaac cttcagctag tgaaaaggta gtaacaaatg gtaaacaaga gaatgattgt 2940
ttaaacctat ctgtggacac ttaatgcaac tgtttaaaaa tgataatcac gagttatgta 3000
gcaacgtgga aatatattta cagaacatta agtggagaaa gcaggacacg aaagtatatatt 3060
tatactacag ttataactca acagttcatt tatatgctgt tcatttaaca gttcatttaa 3120
acagttcatt ataactgttt aaaaatatat atgcttatag tcaaaagctg ttgtgggtgtt 3180
gttgtttagt gcttatagtt gagcattatt ttcttaaatt tcttgaatgt tctttatggg 3240
agtgttacta aaaagtttat gatcacattt tcattgtgaa cataatttga actcattatc 3300
acacacttgg aaaatacaga aaagtggagg aaaaaaaatc atatccccac catccaaaga 3360
catatactct cctcttatct tgttcattct tgtttctgtg cacaggttta tgattataac 3420
tgtgtcaaaa tgtatattca aaatagctgt tacattacct ttgtggratt atgggttaaat 3480
actttcactt taattttttc aaatgttccc tataataatg tcctgataac agtgtattat 3540
gtgtgtctcc attggtgtgc ataatacata ccagaggaa aaattagaaa ataaagtaaa 3600
ttattttaaa aaattaccta tattcccaac acctaacaac tactgctaac atcttgatct 3660
gtttcctcta tcttgtttca gtgcacacgc ttgtgataac agtgttaaat atgtgtgcat 3720
aaagtcctaa atgaaaagat gtggaaaata actaaaatag tgttgtcatt gtgggaattt 3780
ggtaaaatat tttgtctcaa attccttaaa taatctttgg tgttttggtg ataaatttta 3840
tgtatgtatt ttccattaca aatataatac atactcatac aaaactttgg aaattcagta 3900
aagaaaattc acacatatc ccaacaccca acaacaatta actgttaaca tcttgatctg 3960
tgcaatagtc tgtgattatt aggggtgtag tgataagtat gcataaatgt caaagatggg 4020
aagaaagatg aaaaacaaga aatagttgtg tgggtgtgtg gggattatgg ttattttgtt 4080
tcggtttcct tgaaaagtca tcattctagt gttttggtg tccacctta ctacatatat 4140
ttccattata tatgaaatgt gttcattata gaaactttga agttacagaa atgtagaaga 4200
gaaactcacc catgttttca ccatccaaag agtgtggtta acatcttgat atattttctt 4260
catcttgttt ctgtgcacag gtttttggtt tgtaaatatg gttgtggtca ttctatctgt 4320
aatagtgatc acaataaaaa taaagttaaa aataaatatt aaaaaagaaa aaaaaaaacc 4380
cngggggggg nccgg 4395

<210> 225

<211> 3035

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (2911)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2959)

<223> n equals a,t,g, or c

<400> 225

cccggagcag cgcggcagca gcatggctca cgggcccggc gcgctgatgc tcaagtgcgt 60
ggtggtcggc gacggggcgg tgggcaagac gtgcctactc atgagctatg ccaacgacgc 120
cttcccggag agtacgtgcc caccgtcttc gaccactacg caggaagact atgaccgtct 180
gaggccttta tcttacccaa tgaccgatgt cttccttata tgcttctcgg tggtaaatcc 240
agcctcattt caaaatgtka aagaggagtg ggtaccggaa cttaaggaat acgcaccaa 300
tgtacccttt ttattaatag gaactcagat tgatctccga gatgaccca aaacttttagc 360
aagactgaat gatatgaaag aaaaacctat atgtgtggaa caaggacaga aactagcaa 420

agagatagga gcatgctgct atgtggaatg ttcagcttta acccagaagg gattgaagac 480
tgtttttgat gaggctatca tagccatttt aactccaaag aaacacactg taaaaaaaaag 540
aataggatca agatgtataa actgttggtt aattacgtga gaaacatctt cagtggccaa 600
ggaaactgtc ctttctctc agaaagcaaa tgaaatgcta cagctatacc cagacctttt 660
ataggtaatg aagcagttca aaacttgaaa gaaaacaaaa cctgtcctca gaattctata 720
aagtgtatta agaatgttcc ttaaagggtt aagaagcagt aagcagcatc tgaagccaca 780
atctattata aatactttat ttcaactaga aggtacaatc tctcaggggt ttcatagttt 840
aaaaagctac aatcacatca tgttgtaact acgtaaaaaa cagagctgta aatggaactg 900
cttggctttg accatacaca tttctgccc a gcccttacag aatctgcaca aagaaatc 960
tccctttgct ccagtttaatt gttcttgat gtaagttgct ttctattcca gtatatccag 1020
agtggtgaaa taacaaggcc agccacgtag ccaaaggctc ctccaagcgt acaggagatg 1080
ggccatacct gaggagagaa tgtatgagat caaaaaagaa caaatgtttt attattactt 1140
gagcacaagt gtaacctaaa ttttctata ttaaagctta atgtgcttct ttaaagaatg 1200
ccaaaagtgt aataagggtca taactgcatt tatcatgaac actaaaaatg tacacatttt 1260
agttaatgtg cattaaactg taacaaggct tctggcaatt gtagatttag tttgacgctc 1320
cccaaagtgc atgagacaca tgctaaaatt acaaattaaa attttgggtc agactttgctc 1380
ataatgatga actcaattta gctctctgaa ctagtggta atttttttt ttaattccc 1440
actttggctg tgtacatcaa atgaaatgag aagtgtgtat gctgaccaa ccacaagaaa 1500
ctttctttaa gttgtgttaa agaggaaaga cctagaatcc aagcgtgtta catgaaaatt 1560
gtaacagagc agctgcttcc accttcaga tatagatgtt ggaaccacag cagaagttat 1620
agagcgacaa cttatataca cacctagaat gtaagttaaa caaaataccg gcttccagag 1680
acctctttc tccagccata ttacatcagg ctagaagtaa ttaatgttga tttatttcat 1740
ctacaagcag ttggtcccta agtgaaaggc tctgcttgaa aaaaaaaaga aaaaaaagt 1800
ggaggaaaat tttcatgttc ttctgtgaag cttatttggg aactggagc catttcta 1860
ctttctctgg ggggaacagg ccacagaact gtgttagagg tgaaccatct taattactag 1920
ttctattacc taattcagct tccttggttg gtctgctgtg gatctgcctt attgcatatg 1980
ccatgcatca gataatggat gcatcagata atgggtgttag acaaagcttc attgtgaaca 2040
acctaagtca ttttagagaa acaatctcat cacatttttt ctagcctttc ctacatttaa 2100
acttgctgtt gcccaaatta taatttttta aatgtctttg gtgggcttct gttaattcac 2160
atgacttgag cttatagcta tgtctactgc acagattggg taatggaaca ctaaactttt 2220
atacttgaaa atgacagcct taaatgctca tatcagtcac aaatctagga tgtactgtct 2280
tgtgtgatgt gagctttgta gagattttta aaaatataag catcaccttc ccattgaaga 2340
gtggagagag tctactggat gactggccag gaactttctc tctgaatcgg acatttggtat 2400
gtcttctttc ttccaagaaa tgggtggttca cattaaagta tcatggcctt atgtatgctc 2460
aaatggaatc ttatgtaact ttcttattta attttgggtc gcttattttt agataaaatt 2520
gaaaggaatt gtataaatca attaacatat tagctgagtt gtccaacaca tgggtataaac 2580
gaattacaac agtaaactat tacacatttc caactgcct ttgggggattt atgaggattt 2640
tttttgggtg ggggaggggg ctccaattca tatctctgaa accttcaca cttgggtttac 2700
taattcaaak ttagaagtct agaatttgcc ctgccctaac agaaacagat taggaatttg 2760
tctacacaaa ctggtgtcac ctgtttcttg actgggattt ggtttctca ttataaatat 2820
gggaggtaga acagagatct ccaacgtctc tccattttat cacagtaatt ttcttattca 2880
cagtaatcat tgttgggtgt tactttttca nttcacatt ctcaagatgg taaaaatcat 2940
gtatatagat tatcagaant ctaagcaaag atgactgtca catctgaagc tgagggtgct 3000
taggtacatc ggccgcgacc acggtaaagc gaatt 3035

<210> 226

<211> 1511

<212> DNA

<213> Homo sapiens

<400> 226

```

ccggctccgc tgcggaaggc ggacgactag agtcgttggg cccggcgcgga cccgcaggag 60
cgtagagagc gcgggactag agtgcagagc tccgggacgt ggatcggagc cggcgcgatg 120
ggcggagagc aggaggaggga gcggttcgac ggcatgttgc tggccatggc tcagcagcac 180
gagggcgggc tgcaggagct tgtgaacacc ttcttcagct tccttcgacg caaaacagac 240
tttttcattg gaggagaaga agggatggca gagaagctta tcacacagac tttcagccac 300
cacaatcagc tggcacagaa gacccggcgg gagaagagag cccggcaggga ggccgagcgg 360
cgggagaagg cggagcgggc ggccagactg gccaaaggaag ccaagtcaga gacctcaggg 420
ccccagatca aggagctaac tgatgaagag gcagagaggc tgcagctaga gattgaccag 480
aaaaaggatg cagagaatca tgaggcccag ctcaagaacg gcagccttga ctccccaggg 540
aagcaggata ctgaggaaga tgaggaggaa gatgagaagg acaaaggaaa actgaagccc 600
aacctaggca acggggcaga cctgcccaat taccgctgga cccagaccct gtcggagctg 660
gacctggcgg tccctttctg tgtgaacttc cggctgaaag ggaaggacat ggtggtggac 720
atccagcggc ggcacctccg ggtggggctc aaggggcagc cagcgatcat tgatggggag 780
ctctacaatg aagtgaagggt ggaggagagc tcgtggctca ttgaggacgg caagggtggtg 840
actgtgcac tggagaagat caataagatg gagtgggtga gccgcttggg gtccagtgc 900
cctgagatca acaccaagaa gattaaccct gagaattcca agctgtcaga cctggacagt 960
gagactcgca gcattggtgga aaagatgatg tatgaccagc gacagaagtc catggggctg 1020
ccaacttcag acgaacagaa gaaacaggag attctgaaga agttcatgga tcaacatccg 1080
gagatggatt ttccaaggc taaattcaac tagccctgt ttttctctcc ctgaactctt 1140
ggggctgagc tgcaaccacc caactttctt tccactctt ctctgggact tgtgggcctc 1200
agggcttggg gcaggcatgg gactggccca ggcacacagg tcccggggca tcaggagaaa 1260
ggctgggtct tgggaccttg tctccccag ttggcctact gttacacatt aaaacgattt 1320
gcccagctcc ttctgtgtcc tctcttgcc ctggccttct tctggggcac aggcctctta 1380
cggtgctgc tgggaactgg gaktttggct tctagcccag attctgccat gtgacctagg 1440
gcacatcctt gcccctctct gggcctcagt ttctcattac ttaaagatta aaacaagctt 1500
tgccggtggt a                                     1511

```

<210> 227

<211> 2239

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (2238)

<223> n equals a,t,g, or c

<400> 227

```

ggcacgaggg gagctggggg ctgagtttcc ctgagtagag gctggcacag gagagaaggc 60
atcaccccca cctcgtccag gccagaagat gtccagcttc ttgaggctct cctaagtctg 120
gctctccttg gaccaagaga aaatcccggg ccttgaccaaa gaagctgctg atgggagctc 180
caccctggga gggggtgccg gcaccatggg attgagcgcc cgctacggac cccagttcac 240
cctgcagcac gtgcccgaact accgccagaw tgtctacatc ccaggcagca atgccacact 300
gaccaacgca gctggcaagc ggggatggca agggccccagc aggtggcaat ggcaacaaga 360
agaagtcggg caagaaggag aagaagtaac atggaggcca ggccaagagc cacagggcgg 420
cctctcccca accagcccag cttctcctta cctgcaccca ggctcagag tttcagggct 480
aacccccaga atactggtag gggccaaggc catgctcccc ttgggaaaca gaaacaagtg 540
cccagtcagc acctaccct tccccccagc gggkttgaat atgcaaaagc agttccgctg 600
ggaaccccca tccaatcaac tgctgtaccc atgggggttag tgggggttact gtagacacca 660
agaaccattt gccacacccc gtttagttac agctgaactc ctccatcttc caaatcaatc 720
aggcccatcc atcccatgcc tccctctctc ccacccact ccaacagttc ctctttcccg 780

```

```

agtaaggtgg ttgggggtgtt gaagtaccaa gtaacctaca agcctcctag ttctgaaaag 840
ttgsaagggc atcatgacct cttggcctct cctttgattc tcaatcttcc cccaaagcat 900
ggtttgggtgc cagccccttc acctccttcc agagcccaag atcaatgctc aagttttgga 960
ggacatgatc accatcccca tgggtactgat gcttgctgga tttaggaggg gcattttgct 1020
accaagcctc ttcccaacgc cctgggggacc aktcttctgt tttgtttttc attgtttgac 1080
gtttccactg catgccttga cttccccccac ctctcctca aacaagagac tccactgcat 1140
gttccaagac agtatggggt ggtaagataa ggaaggggag tgtgtggatg tggatgggtg 1200
gggcatggac aaagcttgac acatcaagtt atcaaggcct tggaggaggc tctgtatgtc 1260
ctcaggggac tgacaacatc ctccagattc cagccataaa ccaataacta ggctggaccc 1320
ttcccactac ataatagggc tcagcccagg cagccagctt tgggctgagc taacaggacc 1380
aatggattaa actggcattt cagtccaagg aagctcgaag caggtttagg accagggtccc 1440
cttgagaggt cagagggggc tctgtgggtg ctgggtactc cagaggtgcc actgggtggaa 1500
gggtcagcgg ascccagcag gaagggtggg ccagccaggc cattcttagt ccctggggtg 1560
gggaggcagg gagctagggc agggacaaa tgaacagaaa gtctcagccc aggatggggc 1620
ttcttcaaca gggcccctgc cctcctgaag cctcagtcct tcaccttgcc aggtgccgtt 1680
tctcttccgt gaaggccact gcccagggtc ccagtgcgcc ccctagtggc catagcctgg 1740
ttaagttcc ccagtgcctc cttgtgcata gaccttcttc tcccaccccc ttctgcccct 1800
gggtccccgg ccatccagcg gggctgccag agaacccag acctgccctt acagtagtgt 1860
agcgccttct cctcttttgc gctgggtgtg aatagccagt agtgtagtgc ggtgtgcttt 1920
tacgttagtg cgggtgggca gcgggcggcg ggctccgcgc agccgtctgt ccttgatctg 1980
cccgcggcgg cccgtgttgt gttttgtgct gtgtccacgc gctaaggcga cccctcccc 2040
cgtactgact tctcctataa gcgttctct tcgcatagtc acgtagctcc caccacccc 2100
tcttctgtg tctcacgcaa gttttatact ctaatattta tatggctttt ttctctcgac 2160
aaaaaaataa taaaacgttt cttctgaaaa aaaaaaaaaa aaaaaaaaaa ggggggggcc 2220
ggtccccaat cccccctnt 2239

```

<210> 228

<211> 2346

<212> DNA

<213> Homo sapiens

<400> 228

```

ggcacgagcc gaccggcgcg gcgctagcct cggggcttga cgggattgtg gcggctctct 60
ctcccaattc ggaagctaca gctacctccg gacgctctca agatggcgac ctctctgggt 120
tccaacacct acaacaggca gaactgggag gatgcggact tccccattct gtgccagaca 180
tgtcttgag aaaacccata tatccgaatg accaaagaaa agtatgggaa ggaatgcaaa 240
atctgtgcca ggccattcac agtgtttcgc tgggtgccctg gagtccgcat gcgtttcaag 300
aagactgaag tgtgccaaac ctgcagtaaa ttgaagaatg tctgtcagac ctgcctctta 360
gacctagagt atggcctgcc catccagggt cgtgacgcag gattgtcttt taaagatgac 420
atgccaagt cagatgtcaa caaagagtac tatacacaga atatggagag agagatttct 480
aactctgatg gaacacggcc agttggcatg ctggggaaag ccacatctac cagtgcacatg 540
ctgtcaaac tggcccggac cacaccctac taaaaagga atcgacccca catttgctcc 600
ttctgggtga aaggagagt taagagagga gaggaatgtc catacagaca tgagaagcct 660
acagatccag atgacccct tgetgatcag aatattaaag accgttatta cggaatcaat 720
gatcctgtag ctgacaagct tctaaagcgg gcttcaacaa tgccctgggt ggaccacca 780
gaggataaaa ctatcaccac actatatgtt ggtggtctag gtgataccat tactgagaca 840
gatttaagaa atcatttcta ccagttcggg gagatccgga cgatcactgt tgtgcagaga 900
cagcagtgtg ctttcatcca gtttgccaca cggcaggctg cagaagtggc tgctgagaag 960
tcctttaata agttgattgt aaatggccgc agactgaatg tgaaatgggg aagatcccag 1020
gcagctcagag gaaaagaaaa agagaaagat ggaaactacag actctgggat caaactagaa 1080
cctgttccag gattgccagg agctcttct cctcctcctg cagcagaaga agaagcctct 1140

```



```

gccaactact tcaacttgcc cccaagtggc cctccagctg tggatgaacat tgctctgcca 1200
ccgccccctg gcattgctcc acccccaccc ccagggtttg ggccacacat gttccaccca 1260
atgggaccac cccctccttt catgcgggct ccaggaccaa tccactatcc ttctcaggac 1320
cctcagagga tgggagctca tgctggaaaa cacagcagcc cctagcacct tgccaccact 1380
ctggggctct gtggaagaaa gggcacttaa aactcccagt aaatcttgga ataaatatat 1440
ttttccttcc cttgtagttt ccatggtagc tgaatgtgct cagatgtgag cagtcagaga 1500
ctgacagcca tgctttccta tacttggtca aaggatcgat ggaccgtaa taagctgcca 1560
ttaacacatc tggttactgc tgtaacatga ctaataaaac cgaacgcctg ttccccctac 1620
ccgtgtgggg gacacgcaga tgagtgaatt ggaatgtcca gcagagttac cctcccaatt 1680
atatgttcat tttgtatatt ttttggtcgg gggaaaaatt gacctgcagt aaaaaaacct 1740
ttgaccattt ttatgtccat tggatacttt cttttttatc atcttaaaaa aagataacta 1800
gtactaatca ttgtagtggc ctaagtgtga tttaactctt gaagtcacac cctccgaaag 1860
atgagtagaa accagcacca gcacagccca gatcttctct ttcctctcct ttctctcatt 1920
tattcctaaa ggaatctgac ctttttacgt ctctacggcc caaaaaaaga caaaaaataa 1980
aattcctttt tattcctgtc aactggatgg aaacacaaat ttcattggagc tgtgtaccat 2040
cgaagaaacc tgggtgctgg catgaaatta ctgtaaagaa cttcctgtaa aacacgttct 2100
ttaacaaact gaaatgaaaa gcattggagc gtctgaatga aagacgtgac ctcctgctgg 2160
gactctgatg gtcttcagca ttcaccttcg tgtgtcttca gtgtctcatt gtcacccctg 2220
cttctgtttg gtcttagagt gtttgatat aactgaattg tagatggtaa aggaaatttg 2280
atgtgttttt tgtttttaaa taattaaaac gggatcaattt ttcaaaaaaa aaaaaaaaaa 2340
aaaaaa
2346

```

<210> 229

<211> 2246

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (2235)

<223> n equals a,t,g, or c

<400> 229

```

ggcacagcgg cgggtggcggc tgcggcaaca gcggggccga tgtgtagttg gtgactgcct 60
ctccagatgc tgagggtgct gtatcattgg cacaggccag tgctgaaccg tagtgaggta 120
ggctgtgcct tctgaagcag tatctattca caatgaagtt gcagtctccc gaattccagt 180
cacttttcac agaaggactg aagagtctga cagaattatt tgtcaaagag aatcacgaat 240
taagaatagc aggaggagca gtgagggatt tattaaatgg agtaaagcct caggatatag 300
atthtgccac cactgctacc cctactcaaa tgaaggagat gtttcagtcg gctgggattc 360
ggatgataaa caacagagga gaaaagcacg gaacaattac tgccaggctt catgaagaaa 420
atthtgagat tactacacta cggattgatg tcaccactga tggaaagacat gctgaggtag 480
aatttacaac tgactggcag aaagatgcgg aacgcagaga tctcactata aattctatgt 540
ttttaggttt tgatggcact ttatttgact actttaatgg ttatgaagat ttaaaaaata 600
agaaagttag atthgttgga catgctaaac agagaatata agaggattat cttagaattt 660
taagatactt caggttttat gggagaattg tagacaaacc tggtgaccat gatcctgaga 720
ctthggaagc aattgcagaa aatgcaaaag gcttggtggt aatatcagga gaaaggattt 780
gggtggaact gaaaaaaatt cttgttggtg accatgtaaa tcatttgatt caccttatct 840
atgatcttga tgtggctcct tatataggtt tacctgctaa tgcaagttaa gaagaatttg 900
acaaagtcag taaaaatgtt gatggttttt caccaaagcc agtgactctt ttggcctcat 960
tattcaaagk acmagatgat gtcmaaaat tggawttgag gttgaagatc gcgaaagagg 1020
agaaaaacct tggcttattt atagctaaaa ataggaaaga tttaattaaa gcaacagata 1080

```

```

gttcagaccc attgaaaccc tatcaagact tcattataga ttctagggaa cctgatgcac 1140
actcgtgtat gtgaactact gaagtaccaa ggagagcact gtctcctaaa ggaaatgcag 1200
cagtgggtcca ttcctccatt tcctgtaagt ggccatgaca tcagaaaagt gggcatttct 1260
tcaggaaaag aaattggggc tctattacaa cagttgcgag aacagtggaa aaaaagtggg 1320
taccaaatgg aaaaagatga acttctgagt tacataaaga agacctaaaa ctgatggcta 1380
ctaaaaagca gagcatttct ggtaagacta aattttctcc cctccctctt aatgagggtt 1440
tagagactac accagaataa aagacagttt aggggacctc tgtagaacia caagggtctt 1500
attttgtgaa ttatatattt caagaactaa acagagatcc acctttctgg atctgattta 1560
tatcactgaa atgtacagtt cttttggaat agtttcacct gagaaaacat agttggctat 1620
tatcwatctt aacctgttca ggcttttaaa aaaaactggt tttgcatagg gtagtactaa 1680
gatcttaaaa agtggttaact gtcttgaaga aaaaactggt attgtttgtt tgcaattgaa 1740
ataacagggt taccttaaca atgactgtct atgatgtgtc agttcttata tgaattccaa 1800
aataaacctg tgcttaaaaa agaaataatt gaccaagtaa gtttgcataa aatgtgaata 1860
ctaaatgtgt ccccgattgc tggcattcat atgtacagga tttgttctag caagctatgc 1920
ttcagtatgt ggttgatatt tttctgtcac aatgatttct ttatgcatgc agagcctggg 1980
aaagtcattg gattaacttg agggcacta ttgagcctat taattaatta attattgttt 2040
taataaaaaca aacattggta ttggaagata aatatgttta tgtgggtatct gacaatgtgt 2100
attaggtgtc atatacaatg gtaatatgcc tgtctttaaa gtgttatttt attaatataa 2160
aggatatggc tattattata tattctctaa agatttatct tctaaagaaa gatttgagtc 2220
ctaaatgcct tcatncagggt aaataa 2246

```

<210> 230

<211> 2002

<212> DNA

<213> Homo sapiens

<400> 230

```

tctagactag tggatccccg ggctgcagga attcggcacg agatggcggc agcgatgcct 60
gcccggctgt tggggtggcg gtgacgacag gcagcaaaag accagctggg cccagattcg 120
ctgctggagt gctggatgga gcctttctct gccctctgtg acatttccaa ttttagataa 180
tgctcacat ctctgtcccc ccgggacccc ctggagcccc catgatccct aagaagacag 240
cttgaaaccta gatctcacc ccaggatgtt gcgaggctg ctggagcggc cttgcacgct 300
ggcctgctt gtgggctccc agctggctgt catgatgtac ctgtcactgg ggggcttccg 360
aagtctcagt gccctatttg gccgagatca gggaccgaca tttgactatt ctcacctcg 420
tgatgtctac agtaacctca gtcacctgcc tggggcccca rggggtcctc carctcctca 480
aggtctgccc tactgtccag aacgatctcc tctcttagtg ggtcctgtgt cgggtgtcctt 540
tagcccagtg ccatcactgg cagagattgt ggagcggaat ccccggttag aaccaggggg 600
ccggtaccgc cctgcagggt gtgagccccg ctcccgaaca gccatcattg tgcctcatcg 660
tgcccgggag caccacctgc gcctgctgct ctaccacctg cacccttct tgcagcgcca 720
gcagcttgct tatggcatct atgtcatcca ccaggctgga aatggaacat ttaacagggc 780
aaaactgttg aacgttgggg tgcgagaggc cctgcgtgat gaagagtggg actgcctgtt 840
cttgcacgat gtggacctct tgccagaaaa tgaccacaat ctgtatgtgt gtgacccccg 900
gggacccccg catgttgccg ttgctatgaa caagtttggg tacagcctcc cgtacccccca 960
gtacttcgga ggagtctcag cacttactcc tgaccagtac ctgaagatga atggcttccc 1020
caatgaatac tggggctggg gtggtgagga tgacgacatt gctaccaggg tgcgcctggc 1080
tgggatgaag atctctcggc cccccacatc tgtaggacac tataagatgg tgaagcaccg 1140
aggagataag ggcaatgagg aaaatcccca cagatttgac ctcttggtcc gtaccagaaa 1200
ttcctggacg caagatggga tgaactcact gacataccag ttgctggctc gagagctggg 1260
gcctctttat accaactaca cagcagacat tgggactgac cctcgggggc ctcgggctcc 1320
ttctgggcca cgttaccac ctggttcttc ccaagccttc cgtcaagaga tgctgcaacg 1380
ccggccccc cccaggcctg ggcctctatc tactgccaac cacacagccc tccgaggttc 1440

```

```

acactgactc ctccttcctg tctaccttaa tcatgaaacc gaattcatgg ggttgatttc 1500
tccccaccct cagctcctca ctgttctcag agggatgtga gggaactgaa ctctggtgcc 1560
gtgctagggg gtaggggcct ctccctcact gctggactgg agctgggctc ctgtagacct 1620
gaggggtccc tctctctagg gtctcctgta gggcttatga ctgtgaatcc ttgatgtcat 1680
gattttatgt gacgattcct aggagtcctt gcccttagag taggagcagg gctggacccc 1740
aagccccctc ctcttccatg gagagaagag tgatctggct tctcctcgga cctctgtgaa 1800
tatttattct atttatgggt cccgggaagt tgtttggtga aggaagcccc tccctgggca 1860
ttttctgcct atgctggaat agctccctct tctggtcctg gctcaggggg ctgggatttt 1920
gatataattt ctaataaagg actttgtctc gcaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1980
aaaaaaaaaa aaaaaaaaaa aa                                2002

```

<210> 231

<211> 994

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (394)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (853)

<223> n equals a,t,g, or c

<400> 231

```

tcgaccacg cgtccggttg gaggaggtcg gctggttacc gggagttgga gggctgaggt 60
cgggaggggt gtgtgtacag agctctagga ctcacgcacc aggccagtcg cgggttttg 120
gccgaggcct gggttacaag cagcaagtgc gcggttgggg cactgcgag gccgttttag 180
aaaactgttt aaaacaaaga gcaattgatg gataaatcag gaatagattc tcttgacct 240
gtgacatctg atgctgtgga acttgcaaat cgaagtgata actcttctga tagcagctta 300
tttaaaactc agtgtatccc ttactcacct aaaggggaga aaagaaaccc cattcgaaaa 360
tttgttcgta cacctgaaaag tggtcacgca agtnattcat caagtgactc atcttttgaa 420
ccaataccat tgactataaa agctatTTTT gaaagattca agaacaggaa aaagagatat 480
aaaaaaaaaga aaaagaggag gtaccagcca acaggaagac cacggggaag accagaagga 540
aggagaaatc ctatatactc actaatagat aagaagaaac aatttagaag cagaggatct 600
ggcttcccat ttttagaatc agagaatgaa aaaaacgcac cttggagaaa aattttaacg 660
tttgagcaag ctgttgcaag aggatttttt aactatattg aaaaactgaa gtatgaacac 720
cacctgaaag aatcattgaa gcaaatgaat gttggtgaag atttagaaaa tgaagatttt 780
gacagtcgta gatacaaatt tttggatgat gatggatcca tttctcctat tgaggagtca 840
acgtaagtgg aantcatatg aaatactttg gtaatagggt ataaattaaa tttctatggt 900
aattgcttca tattttgcct ttaatatagt tatacttaaa taatgaacaa agatacagag 960
tatgacaatt gggattatta cagttgagcc aagc                                994

```

<210> 232

<211> 486

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature
 <222> (49)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (440)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (485)
 <223> n equals a,t,g, or c

<400> 232
 gactcactat agggcaaagc tggtagcct gccaggtacc ggggccgna attccccgggt 60
 cgaccacgc gtccgggaac agccttctcc tgccctctct gcacctggac aactcaactc 120
 ctgccaatgt gtccctgccag cagaaccagc agcagtgcc acccccaccc aagtgtccct 180
 cacccaagtgt tcccccaaag agccagtagc agtgtctgcc tccagcttcc tctggctgtg 240
 cccaagctc tgggggctgt ggcctagctc cgaggcgcc tgcttctga accaccacag 300
 gcgccaccac cgatgccggc gccagaggyt caactcctgt gacagggcag tggtcagcaa 360
 ggcgrgggt ctggstgckg caygggtctg ggggctgctg ctgatccaga tcctgatgct 420
 gagacaagcg atctttggan gaaacaagaa ttccaagag gccagaaca gcccctctg 480
 gaagnc 486

<210> 233
 <211> 2081
 <212> DNA
 <213> Homo sapiens

<400> 233
 gaagcagttc ttggcatgca cgatacacag tactgaccta cctccagacc atgggtatattt 60
 ataacctctt tattttccta aacaatgaag atgcagttaa agatatcagg tggctgggtta 120
 taagtctttt ggaggacgaa caactggagg ttccgagaaat ggctgctact accttaagcg 180
 gtctgtaca gtgtaacttt cttaccatgg acagtcctat gcagattcat tttgagcaac 240
 tttgcaaac aaaactacct aagaaaagaa agcgagacc tggttctgta ggagatacca 300
 ttcttctgc agagttgggt aaacgccatg ctgggggtgt aggacttgg gcagtgtgtc 360
 tttctagtcc ttacgatgtt cccacctgga tgccccagct cctcatgaat ctcagtgcac 420
 atctaaatga tcctcagcct attgagatga ctgtaaaaaa aaccttatcc aatttccgaa 480
 gactcaccat gacaactggc aggaacataa acagcaattc actgatgacc aactgcttgt 540
 tctcaccgat cttcttgtgt caccatgcta ttatgcatag aaagatgact agtcctcact 600
 tcaggctctt ttcataaaaa attccacacc ctcaggtacc atctgtgggt gctctctgca 660
 agttttaaaa ctgcctctgc tgaagcttca tcattttgggt gggttctgtg ttagatctctg 720
 ttagtctgca ttccacagct tctcagttgc catttgattt cccaacttgt ccggaagtgt 780
 ttccagaata ctgatcactt tttttttga ggcatctgac aaagtcacaa agtctcagac 840
 tagaaataat taccagatg gatcatggca tccaagacca gagtctcaga actcattaag 900
 aaacagttta cttggaatgg agaataacca tctgtaatac aggtcctgtc atttcattca 960
 tctcaaatata ttttgaattc ttcccaaatg gctgctggat ttaggtggta ataggggctg 1020
 tggggccataa atctgaagcc ttgagaacct tgggtctgga gagccatgaa gaggggaagga 1080
 aaagagggca agtcctgaac ctaaccaatg acctgatgga ttgctcgacc aagacacaga 1140
 agtgaagtct gtgtctgtgc acttcccaca gactggagtt tttgggtgctg aatagagcca 1200

```

gttgctaaaa aattgggggt ttggtgaaga aatctgattg ttgtgtgtat tcaatgtgtg 1260
atnttaaaaa taaacagcaa caacaataaa aaccctgact ggctgttttt yccctgtatt 1320
ctttacaact attttttgac cctctgaaaa ttattatact tcacctaaat ggaagactgc 1380
tgtgtttgtg gaaattttgt aattttttwa tttatttwat tctctctccc tttttatttt 1440
gcctgcagaa tcgttgagag actaataagg cttaatatatt aattgatttg tttaatatgt 1500
tatataaatg taaaagagtg tataaactgt agagatagca ttggcaagac attgtacaga 1560
tgcaaccttt tacacaacat cattgtgtaa tttgtaaaga ttcacrtgta gttctttatt 1620
atagtgtatt tgggctttgt acccactgaa tgccattttt ttgtgttttta aattattttc 1680
tttatcttgt tacaaaaact gagatgtggg gttttttttt ttcagttcac ttatcattag 1740
aatgtctgaa cttttatgta acatttttgt gtgcattctt caatgctaac accacatgtt 1800
tgcctatgac aagtttatag agtgaaaggg tatcttcttg gttgaaataa ttcacaaatt 1860
ggatgaatgt atcttgcaac acaccctgta cagtcttctt taaaggaaca ctacagtata 1920
tttttagtat ctacatgctg aatgactgaa tacagaccta aagacagcag tgstcctggg 1980
acagtattta agtgtcggca tacacaggcg taatccctgt ataaagtagt gccaaactga 2040
tttcagttgt gtaactagtt taaaacccaa taaatggatt c 2081

```

<210> 234

<211> 516

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (490)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (498)

<223> n equals a,t,g, or c

<400> 234

```

cggcacgagg ggccagggtg cgggcctgcg cctccctcgg ctccctggcg gggcctcggg 60
gagaggggtg gaagatgtct atggatgtga cattcctggg gacgggtgca gcatacccat 120
ctccaacccg gggcgctctt gctgtgggtc ttcgggtgta aggcgagtsc tggctctttg 180
actgtgggga gggaacacag acacagctta tgaaaagcca acttaaagca gggagaatta 240
ccaagatctt catcacacac ctcatggag accatttctt tggccttcct gggctcctct 300
gcacaatcag cctgcagagt ggctccatgg tgtccaaaca gcctattgaa atctatggcc 360
ctgtaggctt cgggacttta tctggcgaac catggaactc tctcamacgg gagctggctt 420
tccattatgt ggttcatgaa ctggttccta cagcagatca atgtcctgca gaaggaacta 480
aaagaatttn cgcatgtnaa tagagcagac agtcct 516

```

<210> 235

<211> 1129

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (807)

<223> n equals a,t,g, or c

<400> 235

```
cagctcgwcc tctgcttcct tacagcacc ccacctgcca gagctgatcc tccctaggcc 60
ctgcctaacc ttgagttggc cccaatccc tctggctgca gaagtcacct taccaccaat 120
gagaggagg gaggaccag atcttttgag agctgagggt tgagggcatt gagccaacac 180
acagatttgt cgcctctgtc ccgaagaca cctgcacctt ccatgcggas caagatgggg 240
aatggaactg aggaagatta taactttgtc ttcaagggtg tgctgatcgg cgaatcaggt 300
gtggggaaga ccaatctact ctcccgatc acgcgcaatg agttcagcca cgacagccgc 360
accaccatcg gggttgagtt ctccaccgc actgtgatgt tgggcaccgc tgctgtcaag 420
gctcagatct gggacacagc tggcctggag cgttaccgag ccatcacctc ggcgtactat 480
cgtggtgcag tgggggccct cctggtgttt gacctaacca agcaccagac ctatgctgtg 540
gtggagcgtt ggctgaagga gctctatgac catgctgaag ccacgatcgt cgtcatgctc 600
gtgggtaaca aaagtgcct cagccaggcc cgggaagtgc ccactgagga ggcccgaatg 660
ttcgtgaaa acaatggact gctcttctcg gagacctcag ccctggactc taccaatgtt 720
gagctagcct ttgagactgt cctgaaagaa atctttgcga aggtgtccaa gcagagacag 780
aacagcatcc ggaccaatgc catcacntct ggcagtgcct aggttgagca ggagcctggc 840
cctggggaga agagggcctg ttgcatcagc ctctgacctt ggccagcacc acctgcccc 900
actggctttt tggtgccctt tgtcccccact tcagccccag gacctttcct tgccctttgg 960
ttccagatat cagactgttc cctgttcaca gcacctcag ggtcttaagg tcttcatgcc 1020
ctatcacaaa tacctctttt atctgtccac cctcacaga ctaggacctt caaataaagc 1080
tgttttatat caaaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaaaa 1129
```

<210> 236

<211> 1045

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (973)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1001)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1014)

<223> n equals a,t,g, or c

<400> 236

```
atcctcaaag gcagctcagg ctccgtgtgg ctgcgcaacc tgcaactggg cctcttcggc 60
acagcactgg gcctgggtgg gctctgggtg gctgagggtg ccgccgtggc caccgtgggt 120
ttcttttttg ggtacacacc tgctgtcttg ggcgtgggtg tcaaccaggc cttcggcggg 180
ctactgggtg ctgtgggtgt caagtacgct gacaatatcc tcaagggtt tgccacctcc 240
ctgtccattg tgctgtccac tgttgccctc attcgcctct ttggcttcca cgtggacca 300
ttatttgccc ttggcgctgg actcgtcatt ggtgctgtct acctctacag ccttccccga 360
ggtgcagyc aagccatagc ctctgcctct gcctccgcct ccggggccctg cgttcaccag 420
cagcctcccg ggcagccacc accaccgcag ctgtcttccc accgtggaga cctcatcacg 480
```

```

gagccctttc tgccaaagtc agtgctggtg aagtragggc tggcagcaat ggggggacac 540
aaggaggagg gactgggggtg gaggggtggtg ggcactctgca ggaccaagt cgccaccctc 600
cggggcctgg ctccctctggg tttgggagat ggtcttttct cccagggtcac tgagacttct 660
ggaggggtgt gggactagag ctgggtgtca cgtgaacctt tcctggtagg gtgacccct 720
tcccctggag ggggtgtttag agctgccgcc tctgctccct ctaacctctt tggaggcagg 780
gttgggggta ttgtcattca aggccttttt tttgtctgct ccctccccga ccctgtgccc 840
tcttctggag gttctcgtct gggagagtcc ctccagcagt ccctcactca taaggcacac 900
tggacaaaac tccgagtctt aggaatgacg atgcctactg tggggtagtg ccatagttgg 960
gcttttctcc ttncacgttg atatgtatag tcgctttggg nctgccagtt cttntacttg 1020
aatgcttctg gagccaggaa aggca 1045

```

<210> 237

<211> 690

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (666)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (678)

<223> n equals a,t,g, or c

<400> 237

```

ggaggagggt ctgccacagc tctccgcacc tctcctctcc cagggcagcc tgtgagcagc 60
aagctgtggc tctgactctg caggaggaca gagcatccct gacgctttca ggggggcccct 120
cggcactggc ctttgacctc tccaaggtag caggcccaga ggcagcccc aggctgyggg 180
cgctgacact gggcctggca aaacgcgtgt ggagcctgga gcggcgactg gcagctgcag 240
aagagacagc tgtcagcccc aggaagagcc cccggcctgc agggcctcag ctcttcttac 300
cagacccaga tccccagaga ggtggccctg gacctggagt caggaggcgg tgtccaggag 360
agtcgctcat caaccccggtt ttcaagagta agaaaccagc tgggtggcgtg gacttcgatg 420
agacctgaag gtgcagcaca agcgtggccc cgcggggagt ccgcctatga ggggagagggc 480
agtctttgag gcccccatca gagaccccc gccaccacct ccacctgcct gtcctggggc 540
aggactaaca cggctcctca aattccttcc ctgtcaaata aacagctccc ttggttggaa 600
aaaaaaaaaa aaaaaaaaaa agtttttttt aattttaagg cgggccaaaag ttttttttcc 660
tttttngttg aagggttnat tttttagttt 690

```

<210> 238

<211> 1873

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (568)

<223> n equals a,t,g, or c

<400> 238

```
cccgggctca gtatgtggcg ccttcctcgc gcgctgtgtg tgcacgctgc aaagaccagc 60
aagctctctg gaccttggag caggcctgcc gccttcatgt ccactctcct catcaatcag 120
ccccagtatg cgtggctgaa agagctgggg ctccgcgagg aaaacgaggg cgtgtataat 180
ggaagctggg gagggccggg agaggttatt acgacctatt gccctgctaa caacgagcca 240
atagcaagag tccgacaggc cagtgtggca gactatgaag aaactgtaaa gaaagcaaga 300
gaagcatgga aaatctgggc agatattcct gctccaaaac gaggagaaat agtaagacag 360
attggcgatg ccttgccgga gaagatccaa gtactaggaa gcttggtgtc tttggagatg 420
gggaaaatct tagtggaagg tgtgggtgaa gttcargagt atgtggatat ctgtgactat 480
gctgktggtt tatcaaggat gattggagga cctatcttgc cttctgaaag atctggccat 540
gcactgattg agcagtggaa tcccgtangc ctggttggaa tcatcacggc attcaatttc 600
cctgtggcag tgtatggtt gaacacgcca tcgccatgat ctgtggaaat gtctgcctct 660
ggaaaggagc tccaaccact tccctcatta gtgtggctgt cacaagata atagccaagg 720
ttctggagga caacaagctg cctggtgcaa tttgttcctt gacttgtggt ggagcagata 780
ttggcacagc aatggccaaa gatgaacgag tgaacctgct gtccttctact gggagcactc 840
aggtgggaaa acagtgggc ctgatggtgc aggagaggtt tgggagaagt ctgttggaa 900
ttggaggaaa caatgccatt attgcctttg aagatgcaga cctcagctta gttgttccat 960
cagctctctt cgctgctgtg ggaacagctg gccagaggtg taccactgcg aggcgactgt 1020
ttatacatga aagcatccat gatgaggttg taaacagact taaaaaggcc tatgcacaga 1080
tccgagttgg gaacccatgg gaccctaattg ttctctatgg gccactccac accaagcagg 1140
cagtgagcat gtttcttggg gcagtggaa agcaaaagaa agaaggtggc acagtggctt 1200
atgggggcaa gggtatggat cgccctggaa attatgtaga accgacaatt gtgacaggct 1260
ttggccacga tgcgtccatt gcacacacag agacttttgc tccgattctc tatgtcttta 1320
aattcaagaa tgaagaagag gtctttgcat ggaataatga agtaaaacag ggactttcaa 1380
gtagcatctt taccaaagat ctgggcagaa tctttcgctg gcttggacct aaaggatcag 1440
actgtggcat tgtaaatgtc aacattccaa caagtggggc tgagattgga ggtgcctttg 1500
gaggagaaaa gcacactggt ggtggcaggg agtctggcag tgatgcctgg aaacagtaca 1560
tgagaaggct tacttgta atcaactaca gtaaagacct tcctctggcc caaggaatca 1620
agtttcagta aaggtgtttt agatgaacat cccttaattt gaggtgttcc agcagctgtt 1680
tttgagaag acaaagaaaa ttaaagtttt ccctgaataa atgcattatt atgactgtga 1740
cagtactaa tccccctatg accccaaagc cctgattaaa tcaagagatt ctttttttaa 1800
aaatcaaaat aaaattgtta caacatagcc atagttacta aaagatgagt taggtggatt 1860
tttattatgg tca 1873
```

<210> 239

<211> 905

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (873)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (874)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (897)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (898)

<223> n equals a,t,g, or c

<400> 239

```
tgcgggtcccc cttctaggct gacccacgcg tccgggtgggg ccccgggcgg cgttgaccat 60
gacccagcag ggcgcggcgc tgcagaacta caacaacgag ctggtcaagt gcatagagga 120
gctgtgccag aagcgggagg agctgtgccg gcagatccag gaggaggagg acgagaagca 180
gcggctgcag aatgagggtga ggcagctgac agagaagctg gcccgcgtca acgagaacct 240
ggcacgcaag attgcctctc gcaacgagtt cgaccggacc atcgcggaga cggaggccgc 300
ctacctcaag atcctggaga gctcccagac tttgctcagc gttctcaaga ggaagctgg 360
gaacctgacc aaggctacag ccccagacca gaaaagtagc ggcggcaggg acagctgacc 420
agaccacggg cagggcctgc ctccgtgtgc ccctcagctc agcccagca agtgtgtgct 480
cagagcatct ttgttcttca cggcagcagc taccttcctt cactgtctca ggtgccgaga 540
ggggcagggt ccagcctcca ctggcatcag tgacaagccc agggcacagc ccacccgggg 600
gtcctcgctt catgctcaca caggctatgg ggatgggtggg ctccagggtca gctctgcaag 660
gggcttgtct ctgtggcacc cacactcctg ccctgccagg gaggctctgg ttgtctgagc 720
accatggggg cccctcacc ttgtccctcc tcagccagca gaggcccagg gcaagggaca 780
ggaggacagg ggttctcctt caccacagaa cccaaacctc aggtctcacc cctgtggcct 840
gtgattatga ataaagatta tctttgtaaa gannaaaaaa aaaaaaaaaa aaaaccnngg 900
ggggg                                           905
```

<210> 240

<211> 1484

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1457)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1471)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1480)

<223> n equals a,t,g, or c

<400> 240

```
gtaacaaaaa tcaggtaaca accattagct tttgcaagaa gtcaggttga ctagcaagga 60
gtctgcttct gctacttgga gaagagattt agaattatgt atcttttgtt acagatatat 120
agatatataa atatacagat atacaaataa ggggtgaagat ggagggaatc tgataaagac 180
atcttataaa ttcaacagac acaaaagaat ttgatctccc ataagcaact gtgaaattac 240
aataacagat cctgggaagt tctacaattc taattcagtt ttttcaaggg ggaacatggc 300
```

```

aaaggtgttc agtttcatcc ttgttaccac cgctctgaya atgggcaggg aaatttcggc 360
gctcgaggac tgtgccagag agcagatgcg gctcagagcc caggtgcgcc tgcttgagac 420
ccgggtcaaa cagcaacagg tcaagatcaa gcagcttttg caggagaatg aagtcagtt 480
ccttgataaa ggagatgaga atactgtcgt tgatcttgga agcaagaggc agtatgcaga 540
ttgttcagag attttcaatg atgggtataa gctcagtgga ttttacaaaa tcaaacctct 600
ccagagccca gcagaatttt ctgtttattg tgacatgtcc gatggaggag gatggactgt 660
aattcagaga cgatctgatg gcagtgaaaa ctttaacaga ggatggaaag actatgaaaa 720
tggccttgga aattttgtcc aaaaacatgg tgaatattgg ctgggcaata aaaatcttca 780
cttcttgacc actcaagaag actacacttt aaaaatcgac cttgcagatt ttgaaaaaaa 840
tagccgttat gcacaatata agaatttcaa agttggagat gaaaagaatt tctacgagtt 900
gaatattggg gaatattctg gaacagctgg agattccctt gcggggaatt ttcacacctga 960
ggtgcagtg ggggctagtc accaaagaat gaaattcagc acgtgggaca gagatcatga 1020
caactatgaa ggaactgcg cagaagaaga tcagtcctggc tgggtggtta acaggtgtca 1080
ctctgcaaac ctgaatggtg tatactacag cggcccctac acggctaaaa cagacaatgg 1140
gattgtctgg tacacctggc atgggtggtg gtattctctg aaatctgtgg ttatgaaaat 1200
taggccaaat gattttattc caaatgtaat ttaattgctg ctgttgggct ttcgtttctg 1260
caattcagct ttgtttaaag tgatttgaaa aatactcatt ctgaacatat ccatgcgcaa 1320
tcatgataac tgttgtgagt agtgcttttc attcttctca cttgcctttg ttacttaaatg 1380
tgctttcagt acagcagata tgcaatatcc accaaataaa tgtagactgt gttaawaaaa 1440
aaacaacaaa tatgaanaaa aaaaaaaaaa nggggggctn tttt 1484

```

<210> 241

<211> 1521

<212> DNA

<213> Homo sapiens

<400> 241

```

caaaagcctt aatgggcctg cagactttga aaagcgagtg gagggcggtg ggcggccgcg 60
tgcccccctg gtcaatgccc tcctgacagc acccgagttc cttatttaca ctggctgcat 120
ggtttgtgtg tttctgtttt gtttctctcc ccctgcaggg ctgtttkcgg ggtgggggtg 180
ggggttcgct atgtcggatg acgattcgag ggccagcacc agctcctcct catcttcgtc 240
ttccaaccag caaaccgaga aagaaacaaa caccccaag aagaaggaga gttaaagtcag 300
catgagcaaa aactccaaac tcctctccac cagcgccaag agaattcaga aggagctggc 360
ggacatcact ttagaccctc cacctaattg cagtgtgtgt cccaaaggcg ataacatcta 420
tgaatggaga tcaaccattc tagggcctcc aggatccgtg tatgagggtg gtgtattctt 480
tctcgatatc acttttacac cagaatatcc cttcaagcct ccaaaaggta catttcggac 540
aagaatctat cattgttaata ttaacagtca aggtgttatt tgcttggaca tattgaaaga 600
taattggagt ccagcactaa ccattttctaa agtcctcctt tctatctgct cacttcttac 660
agactgtaat cctgccgacc ccttggtggg aagtattgcc actcagtata tgaccaacag 720
agcagaacat gacagaatgg ccagacagtg gaccaagaga tacgctacat aaattgggg 780
ttcacaattc ttacattatt tgtctgtcac agaagagagc tgcttatgat tttgaaggg 840
tcagggaggg tgggagttgg taaagagtag ggtatttcta taacagatat tattcagtc 900
tatttcctaa gattttgttg taacttaagg tatcttgcta cagtagacag aattggtaat 960
agcaactttt aaaattgtca ttagttctgc aatattagct gaaatgtagt acagaaaaga 1020
atgtacattt agacatttgg gttcagttgc ttgtagctg taaatttaaa acagcttaat 1080
ttggtacagg ttacacatat ggccatttat gtaaagtccc tctaagacta catactttt 1140
gtttaaaaca aaattggaat ttgttttccc ttcttggaag ggaacattga tatttaacag 1200
agtttttaga gattgtcatc tcatatatat aaaaaggaca cgtggctata aaacaccata 1260
taagagatga gtagtgcggt ttattttata tgccaatcta ctttgtttaa aaaaggctc 1320
aatcaggact tgtgaaaacc tgtagtgaat taccttaagc tgtaactaa ctgtaaggcg 1380
tggaatagga gttgctcagt ggattggttc tatgttgttg actacttaag tctgcatttg 1440

```

ttactgtgct aataaacaat attaaaaacc acctaataaa cactgctgtg ttcatttact 1500
 tttcttttgc cttttggttg c 1521

<210> 242
 <211> 1144
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc feature
 <222> (1093)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (1105)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (1106)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (1139)
 <223> n equals a,t,g, or c

<400> 242
 gcaaactgct acgaagaaat acagataaaa aaggcaagcc tgaaatagca tgtgaaaacc 60
 cacattgtac agtagtacct ttgaagcagc ctactctaca cattgcagac aaagatccaa 120
 tcccagagga gcaggaatta gaagcttatg tagatgatag agatattgat agtgatttca 180
 gaaaggatga tttttattac ttgtctcaag aagacaaaga gagacagaag cgtgagcatg 240
 aagaatccaa gaggggtgctc caagaattaa aatctgtgct gggattttaa gcttcagagg 300
 cagaaaaggca gaagtggaag caacttctat ttagtgatca tgtgtttctt catatagctt 360
 taaaattatg ctattgacat tatgggaaag atttatcaat gagagaaatg tgtctctttt 420
 tcagccgtgt tgaaatcctt gtctcctgta gaccagtggt aaccataaag taattcagaa 480
 ccatcaatga attcagatat gggaaaagtc agtaaaaatg atactgaaga ggaaagtaat 540
 aaatccgcca caacagacaa tgaaataagt aggactgagt atttatgtga aaactctcta 600
 gaaggtaaaa ataaagataa ttcttcaaat gaagtcttcc cccaaggagc agaagaaaga 660
 atgtgttacc aatgtgagag tgaagatgaa ccacaagcag atggaagtgg tctgaccact 720
 gcccctccaa ctcccagga ctcattacag ccctccatta agcagaggct ggcacggcta 780
 cagctgtcac cagattttac cttcactgct ggccttgctg cagaagtggc tgctagatct 840
 ctctccttta ccaccatgca ggaacagact tttggtgatg aggaggaaga acaaataata 900
 gaagaaaata aaaatgagat agaagaaaag taagaaccaa gattcatatg aagtgatatt 960
 agattgttcc ttttacaaaa gtgttttagct tcaagactgg aaagggaata tgagtgtgaa 1020
 tttactatat ataaagctaa gatgtggatt tacaggaaga accctgggtt gaataactga 1080
 tskgaaatta ggnaaaactt gtcnnggca tttcccgttg aaagtcccc cttaaaganc 1140
 ccg 1144

<210> 243

<211> 934

<212> DNA

<213> Homo sapiens

<400> 243

```
aacacaggaa aagtcgtcct gccaatcact gtgtttatatt ctatggagat gagatttcat 60
tttcatgtca tgagaccagt aggttttcag ctatatgccca aggagatggc acgtggagtc 120
cccgaacacc atcatgtgga gacatttgca attttcctcc taaaattgcc catgggcatt 180
ataaacaatc tagttcatac agctttttca aagaagagat tatatatgaa tgtgataaag 240
gctacattct ggtcggacag gcgaaactct cctgcagtta ttcacactgg tcagctccag 300
cccccaatg taaagctctg tgtcggaaac cagaattagt gaatggaagg ttgtctgtgg 360
ataaggatca gtatgttgag cctgaaaatg tcaccatcca atgtgattct ggctatgggtg 420
tggttggtcc ccaaagtatc acttgctctg ggaacagaac ctggtaccca gaggtgcccc 480
agtgtgagtg ggagaccccc gaaggctgtg aacaagtgtc cacaggcaaa agactcatgc 540
agtgtctccc aaaccagag gatgtgaaaa tggccctgga ggtatataag ctgtctctgg 600
aaattgaaca actggaacta cagagagaca gcgcaagaca atccactttg gataaagaac 660
tataatTTTT ctcaaaagaa ggaggaaaag gtgtcttgct ggcttgcttc ttgcaattca 720
atacagatca gtttagcaaa tctactgtca atttggcagt gatattcatc ataataaata 780
tctagaaatg ataatttgct aaagttagt gctttgagat tgtgaaatta ttaatcatcc 840
tctgtgtggc tcatgttttt gcttttcaac acacaaagca caaatttttt ttcgattaaa 900
aatgtatgta taaaaaaaaa aaaaaaaaaa tcga 934
```

<210> 244

<211> 915

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (210)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (243)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (244)

<223> n equals a,t,g, or c

<400> 244

```
gcgaccgccg gggcgctgca gaacatcacg gcaggcgacc gagtgggcgg ggggtgctgag 60
ccgcctgccc tggagcagga gcgtattctg aacccctgc tagaccgtgt caggaccgcc 120
gaccaccacc agctgcgctc actgactggc ctcatccgaa acctgtctcg gaacgctagg 180
aacaaggacg agatgtccac gaagggtggn gagccacctg atcgagaagc tgccrggcas 240
gtnnnggtga gaagtygccc ccagccgagg tgctggctca catcatagct gtgctcaaca 300
acctggtggt ggccagcccc atcgtgccc gagacctgct gtattttgac ggactccgaa 360
agctcatctt catcaagaag aagcgggaca gccccgacag tgagaagtcc tccccggcag 420
catccagcct cctggccaac ctgtggcagt acaacaagct ccaccgtgac ttycgggcga 480
```

aggctatcgg aaggaggact tcctgggccc ataggatgaag ccttctggag gagaaggatga 540
cgtggcccgag cgtccaaggg acagactcag ctccaggctg cttggcagcc cagcctggag 600
gagaaggcta atgacggagg ggccccctgc tggggcccct gtgtgcatct ttgagggtcc 660
tggggcacca ggaggggagc ggtcttatag ctggggactt ggcttccgca gggcaggggg 720
tggggcaggg ctcaaggctg ctctggtgta tgggggtggg acccagtcac attggcagag 780
gtgggggttg gctgtggcct ggcagtatct tgggatatgcc agcactggga ataaagatgg 840
ccatgaacag tcaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 900
aaaaaaaaaa aaac 915

<210> 245

<211> 1276

<212> DNA

<213> Homo sapiens

<400> 245

gaattcggca gagccccaag gaagaccagc ctgcctctgg tcggttcctg gcgctctgcg 60
tttcgtgacc ttgtccagta gaaggctatt taattttcac aactgcttga attttgacat 120
acaagatgaa gcaagatgcc tcaagaaatg ctgcctacac tgtggattgt gaagattatg 180
tgcatgtggt agaatttaat ccctttgaga atggggattc aggaaacctt attgcatatg 240
gtggcaataa ttatgtggtc attggcacgt gtacgtttca ggaagaagaa gcagacgttg 300
aaggcattca gtataaaaca cttcgaacat ttcacatgg agtcagggtt gatggcatag 360
cttgaggccc agagactaga cttgattcat tgcctccagt aatcaaattt tgtacttcag 420
ctgctgatat gaaaattaga ttatttactt cagatcttca ggataaaaaat gaatataagg 480
tttttagagg ccataccgat ttcattaatg gtttggtggt tgatcccaaa gaaggccaag 540
aaattgcaag tgtgagtgc gatcacacct gcaggatttg gaacttgga ggagtgc aaa 600
cagctcattt tgttcttcat tctcctggca tgagtgtgtg ctggcatcct gaggagactt 660
ttaagctaag ggttgagagc aagaatggaa caatccggtt ttatgatctt ttggcccaac 720
aggctatttt atctcttgaa tcagaacaag tgccattaat gtcagcacac tgggtgcttaa 780
aaaacacctt caaagttgga gccgttgagc gaaatgattg gttaatttgg gatattactc 840
ggtccagtta tcctcaaaat aagagacctg ttcacatgga tcgagcctgc ttattcaggt 900
ggtccacaat tagtgaaaat ctggttgcaa ccactgggta tcctggcaaa atgcaagcca 960
gtttcaaat catcathtag gacaccctca gcccatcctc atgggttctg tagccgttg 1020
atctggactg tcctggcatc gaactctccc tctgtgtgta attggaggag accacaagct 1080
gttgttttgg gtgactgaag tataaagtgt tttctgtacc ttagattcac aaactttgta 1140
tttttagtac atattttgaa gaatttctat agtacatatt ttgaagaatt tttatatcaa 1200
atataccgta tacttttagaa aatgtctcag ttgcttttat taaataaaat gttgatgggt 1260
tgaaaaatta aaaaaa 1276

<210> 246

<211> 3366

<212> DNA

<213> Homo sapiens

<400> 246

cccacgcgtc cgaactggac agggatgacc aacctgctgg atatcccagg acttagctca 60
ctctctgaca ccatgatcat ggactccatt gctgccttcc tcgtgttgcc caaccgatta 120
ctggtgcccc ttgtgcctga ccttcaagat gtggctcagt tgcgttcccc tctgcccagg 180
ggcattattc gaattcacct gctgggtgct cgagggtgta gttccaagga caaatatgtg 240
aagggcctga ttgagggcaa gtcagacca tatgcacttg tgcgtttggg taccagaca 300
ttctgcagtc gtgtcattga tgaagaactc aaccacaggt ggggagagac ttatgaggtg 360
atggtacacg aggtcccagg gcaggagatt gaagtggagg tggtcgacaa ggatccagat 420

aaagatgact ttctgggcag aatgaagctg gatgtaggga aggtggttaca ggctagcgtt 480
ctggatgatt gggtccctct acaaggtggg caaggccaag ttactttgag gctagaatgg 540
ctgtcacttt tgctcagatgc agagaaactg gagcaggttc tacagtggaa ttggggagtc 600
tcctctcgac cagatccccc gtcagctgcc atcttagttg tctacctgga tcgggcccag 660
gatcttcctc tgaagaaggg gaacaaggaa cccaacctta tggtaacct gtcaattcag 720
gatgtgactc aggagagcaa ggctgtctac agtaccact gccagtggtg ggaggaagcg 780
ttccggttct tcctacaaga cctcaaagc caggagctcg atgtgcaagt gaaggatgat 840
tccaggcccc tgacttttag agcactgacg ctgcctctgg ccgcctgct gactgcccc 900
gaactcatcc tggaccagt gttccagctc agcagctctg gtccaaactc cagactctat 960
atgaaactag tcatgaggat cctgtacttg gattcatcag aaatatgctt cccacgggtg 1020
cctggttgct ctggtgcttg ggacgtggac agtgagaatc cccagagagg cagcagtggtg 1080
gatgccccac ctgcaccctg tcacacgact cctgatagcc agtttgggac tgagcatgtg 1140
cttcggatcc atgtattaga ggcccaggac ctgattgcca aagaccgttt cttgggggga 1200
ctggtgaagg gcaagtcaga cccctatgtc aaactaaagt tggcaggacg aagcttccgg 1260
agccatggtt ttcgggaaga tctcaatccc cgctggaatg aggtttttga ggtgatcgct 1320
acatcagttc caggccaaga gctagaggtt aagctctttg acaaggactt ggacaaggat 1380
gattttctgg gcaggtgtaa agtgctctc accacagctt taaacagtggt cttccttgat 1440
gagtggctga ccctggagga tgtcccatct ggccgcctgc acttgccctt ggagcgtctc 1500
acccccctgc cactgctgc tgagttagag gagtgctgc aggtgaatag tttgatccag 1560
actcagaaga gtgcggagct ggctgcggcc ctgctatcca tctatatgga gcgggcagag 1620
gacctccgc tgcgaaaagg caccaagcac ctacgccctt atgctactct cactgtggga 1680
gatagttctc ataaaaccaa gactatttcg caaacttcag cccctgtctg ggatgagagt 1740
gcctcctttc tcatcaggaa accacacact gagagcctag agttgcagggt tcggggtgag 1800
ggcactggcg tgctgggctc attatccctg cccctctcag agctcctcgt ggctgaccag 1860
ctctgcttg accgctggtt tacactcagc agtggtcagg ggcagggtgct actgagagca 1920
cagctaggga tcctggtgct ccagcactcg ggagtggaa ctcatagcca cagctacagc 1980
cacagctcct catcgtgag tgaagaacca gagctctcgg ggggaccccy tcacatcacc 2040
tcctcagccc cagagctccg gcagcgccta acacatggtg acagtcacct tgaggctcca 2100
gcsgggcctc tgggccagggt gaaactgact ctgtggtact acagtgaaga acgaaagctg 2160
gtcagcattg ttcatggtt ccggtccctt cgacagaatg gacgtgatcc tcctgatccc 2220
tatgtgtcac tggtgtact gccagacaag aaccgaggca ccaagaggag gacctcacag 2280
aagaagagga ccctgagtc tgaatttaat gaacgggttg agtgggaact cccctggat 2340
gaggccaga gacgaaagct ggatgtctct gtcaagtcta attcctcctt catgtcaaga 2400
gagcgtgagc tgctggggaa ggtgcagctg gacctagctg agacagacct ttcccagggt 2460
gtagcccggt ggtatgacct gatggacaac aaggacaagg gcagctccta ggagctggcg 2520
agtcccagcc tgactgctct gtcttcctgc cttcgtctcg ctccatcacc gcctcaatgt 2580
gatgagccta aagctagggt ccaagggcag agcctgtgcc cttcagccct ttcacctaac 2640
aggcccatat tcgggccttt gcctgaccaa agagaagaac cgtatgttcc ctttactgca 2700
cggcctttat cttctgggc ccctggggcg gggacctgag ctggctgttt cctgctttgc 2760
ctgcacattg ttctccctc ctcccaactc ctcagggcct tctgtatctg tgccctggcca 2820
gtggcagcac tagcagtgg attagcttat gccaaataca gctttggaag gatctttttt 2880
tctttaacta gatggtcacc ttcttcctta ccacacatgg gtgggaagggt ggacaggcta 2940
acctctccag ctgtgagcct cttagactac tgcatgtagc aaatgttcag cagctcaggc 3000
ccccatgtcc agttctgtcc cactgtcct caacctgtc ctgaaaattc tactgctttg 3060
atggctgggg ccagctctct gtcactttgg aaactgagga cgcgtggatt ctactcaagc 3120
ctccaagtag tggcatatca gtcttgagc tcctaagtg tgatacggag agggctttgg 3180
aggatctgg acagcagggc caattttttt gcccaagtgc ctaggctgct aactcactga 3240
ctagaactta atctggtact ttacagtttt gcaccaactc tgccaagcca ctggacttta 3300
cattaacat catactcaaa aaaaaaaaaa aaaaaaatt cggggggggg cccgttacc 3360
atttg 3366

<210> 247
<211> 2148
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (1259)
<223> n equals a,t,g, or c

<400> 247
gcggccgccca agcgatccct gctccgcgcg acactgcgtg cccgcgcacg cagagaggcg 60
gtgacgcact ttacggcggc agcgtaaagt cgtgacgctc gtcagtggct tcagttcaca 120
cgtggcgcga gcggaggcag gttgmtgtgt ttgtgcttcc ttctacagcc aatatgaaaa 180
ggcctaagtt aaagaaagca agtaaacgca tgacctgcca taagcggat aaaatccaaa 240
aaaaggttcg agaaccatcat cgaaaattaa gaaaggaggc taaaaagcrg ggtcacaaga 300
agcctagtaa agaccagga gttccaaaca gtgctccctt taaggaggct cttcttaggg 360
aagctgagct aaggaaacag aggcttgaag aactaaaaca gcagcagaaa cttgacaggc 420
agaaggaaact agaaaagaaa agaaaacttg aaactaatcc tgatattaag ccatcaaatg 480
tggaacctat ggaaaaggag tttgggcttt gcaaaactga gaacaaagcc aagtcgggca 540
aacagaattc aaagaagctg tactgccaag aacttaaaaa ggtgattgaa gcctccgatg 600
ttgtcctaga ggtgttggat gccagagatc ctcttggttg cagatgtcct caggtagaag 660
aggccattgt ccagagtggg cagaaaaagc tggacttat attaaataaa tcagatctgg 720
taccaaagga gaatttggag agctggctaa attatttgaa gaaagaattg ccaacagtgg 780
tgttcagagc ctcaacaaaa ccaaaggata aagggaagat aaccaagcgt gtgaaggcaa 840
agaagaatgc tgctccattc agaagtgaag tctgctttgg gaaagagggc ctttggaac 900
ttcttgaggg ttttcaggaa acttgcagca aagccattcg ggttgaggta attggtttcc 960
caaatgtggg gaaaagcagc attatcaata gcttaaaaaca agaacagatg tgtaatgttg 1020
gtgtatccat ggggcttaca aggagcatgc aagttgtccc cttggacaaa cagatcaca 1080
tcatagatag tccgagcttc atcgtatctc cacttaattc ctctctgctg cttgctctgc 1140
gaagtcagc aagtattgaa gtagtaaac cgatggaggc tgccagtgcc atcctttccc 1200
aggctgatgc tcgacaggta gtactgaaat atactgtccc aggctacagg aattctctng 1260
gaatttttta ctrtgcttgc tcagagaaga ggtatgcacc aaaaagggtg ratcccaa 1320
gttgaagggt ctgccaaact gctgtggtct gagtggacag ggtaagcttt cttttctgtt 1380
ggcatttttg tgaccactag aataaacctt cttttgacac atcttatttt taatatcagt 1440
gcctcattag cttactattg ccatccccct acatcttggc ctctctctcc atattttaat 1500
gagagtattg tggtagacat gaaaagcggc ttcaatcttg aagaactgga aaagaacaat 1560
gcacagagca taagagccat caagggccct catttggcc aatagcatcct tttccagtct 1620
tccggtctga caaatggaat aatagaagaa agggacatac atgaagaatt gccaaaacgg 1680
aaagaaagga agcaggagga gagggaggat gacaaagaca gtgaccagga aactgttgat 1740
gaagaagttg atgaaaacag ctgaggcatg ttgtctgcag aagagacagg ggaggcactg 1800
tctgaggaga ctacagcagg tgaacagtct acaaggctct ttatcttgga taaaatcatt 1860
gaagaggatg atgcttatga cttcagtaca gattatgtgt aacagaacaa tggcttttta 1920
tgattttttt tttaacattt taagcagact gctaaactgt tctctgtata agttatggta 1980
tgcatgagct gtgtaaattt tgtgaatatg tattatatta aaaccaggca acttggaatc 2040
cctaaattct gtaaaaagac aattcatctc attgtgagtg gaagtagtta tctggaataa 2100
aaaaagaaga tacctattaa aaaaaaaaaa aaaaaaaaaa aaaaaaaa 2148

<210> 248
<211> 2225
<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (14)

<223> n equals a,t,g, or c

<400> 248

```
ccaaagaatt gggncacagc acgtgctgac caccatgcct cgatgaactg ggtcccctgc 60
ggccactctt attttgwgc cacacttaat agcttcatcc acgtcctcat gtactcttac 120
tatggtttgt cgtcagtcctt ttccatgcgt ccatacctct ggtggkaaga agtacatcac 180
tcaggggcag ctgcttcagt ttgtgctgac aatcatccag accagctgcg gggtcactctg 240
gccgtgcaca ttccctcttg gttggttgta tttccagatt ggatacatga tttccctgat 300
tgctctcttc aaaaacttct acattcagac ctacaacaag aaaggggcct cccgaaggaa 360
agaccacctg aaggaccacc agaatgggtc catggctgct gtgaatggac acaccaacag 420
cttttcaccc ctggaataca atgtgaagcc aaggaagctg cggaaggatt gaagtcaaag 480
aattgaaacc ctccaaacca cgtcatctga ttgtaagcac aatatgagtt gtgccccaat 540
gctcgttaac agctgctgta actagtctgg cctacaatag tgtgattcat gtaggacttc 600
tttcatcaat tcaaaacccc tagaaaacgt atacagatta tataagtagg gataagattt 660
ctaacatttc tgggctctct gacccctgcg ctagactgtg gaaagggagt attattatag 720
tatacaacac tgctgttgcc ttattagtta taacatgata ggtgctgaat tgtgattcac 780
aatttaaaaa cactgtaatc caaacttttt tttttaactg tagatcatgc atgtgattgt 840
aaatgtaaat ttgtacaatg ttgttatggt agagaaacac acatgcctta aaatttaaaa 900
agcagggccc aaagcttatt agtttaaat aggggtatgtt tcaagtttgt attaatattg 960
aatagctctg tttagaaaaa atcaaagacc atgatttatg aaactaatgt gacataattt 1020
ccagtgaact gttgatgtga aatcagacac ggacacctca gttttgtact attggctttg 1080
aatcaagcag gctcaaactc agtggaaacag tcagtttaac tttttaacag atcttatttt 1140
tttattttga gtgccactat taatgtaaaa aggggggggc tctacagcag tcgtgatgaa 1200
acttaaatat atattctttg tcctcgagat tttaggaagg gtgtagggtg agtaggccat 1260
ttttaatttc tgaagtgtca agtggtttta tacagcaaac aaaaagtcaa ttttgctttc 1320
caccagtgcg agagaggatg tatacttttc aagagagatg attgcctatt taccgtttga 1380
cagagtcccg tagatgagca atggggaact gggtgccagg gtctaaattt ggattgattt 1440
atgcactgtt atctgttttg acacagattt ccttgtaaaa tgtgcctagt ttacccaaat 1500
taacaaaggg ggggaaagga ccttagaact ttttaaggta aaatcaaata tagctacagc 1560
ataagagaat cgagaaattt gatagaggta acttggttta tgtaaatcta atagtacttg 1620
taatttcctt ctgcttagaa tctaaagatg tgtttagaac ctcttgttta aaaataatag 1680
actgcttadc ataaaatcac atctcacaca tttgaggcag tggtaaaaca ggtaaagcct 1740
atgatgtgtg tcatttttaa gtgtcggaat ttagcctctg aataccttct ccattggggg 1800
aaagatatc ttggaaccac tcatgacata tcttagaagg tcattgacaa tgtataaact 1860
aattgttggt ttgatattta tgtaaatatc agtttaccat gctttaattt tgcacattcg 1920
tactataggg agcctatttg ttctctatta gtcttggtgg ttttctgttt gaaaaggagt 1980
catggcatct gtttacattt accttatcaa acctagaatg tgtatattta taaatgtatg 2040
tcttcattgc taggtactaa tttgcagatg tctttacata tttcaatata gaaactataa 2100
cattcaatag tgtgctgtca aagtgtgctt agctcacctg gatataccta cattgttaaa 2160
tgtctaaaca gtaatcatta aaacattttt gattaaaaaa aaaaaaaaaa aaaaaaaaaa 2220
aaaaa 2225
```

<210> 249

<211> 1204

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1197)

<223> n equals a,t,g, or c

<400> 249

```
tcgccgctgg ctccgtctgt tggggggcga acacgccgcg gtcctcgtcg tggtgagcgc 60
ascactcagg ctggtcctgg ggggtggggct gtaggggaaa gtgctaaagc cgctgagtga 120
agtaagaact ctgctagaga ggaaatggct gcttcatcat catcctcctc agctgggtggg 180
gtcagtgga gttctgtcac tggatctggg ttccagtgtct cagaccttgc cccaccacgg 240
aaagcccttt tcacctaccc caaaggagct ggagagatgt tagaagatgg ctctgagaga 300
ttcctctgcg aatctgtttt tagctatcaa gtggcatcca cgcttaaaca ggtgaaacat 360
gatcagcaag ttgctcggat ggaaaaacta gctgggtttgg tagaagagct ggaggctgac 420
gagtggcggg ttaagcccat cgagcagctg ctgggattca cccctcttc aggttgatac 480
tgctggatg gtcacctctg gtgcgcagca agtgcaaagc cagtggggga ctttctcaca 540
gcttacatag ccatccagag atccacagct acgtcactga attgttaatg cacatttcta 600
cttggtttct ctgtatctat tcacaggcaa caaatactta tatgtgtgat ctttcaggga 660
atgttttggg tatttggttt taaaagtatt gggaatcaga ttaagacaat cagtttcaga 720
gaaccaggag gtttgggggt aagagatact caaaaatttt cacaagccaa gtagggcata 780
tatcagattt ggccaactga atggcgtctg tcctgtcatc catatgggtg ctggaaatat 840
ttaccagtca aggtcaagggt cagcatctgt ggtaaataat atagcattct gacctaaaaa 900
agttattttg cagatgaatg tgttttcaac tcaggacctt tccaaatgag gaatttttaa 960
atattctttt ttttttcccta ttttttagaca tcaattctat agattctgac tttttctaac 1020
ctcttataga catgccaaat gctggcaaaa agaagtgtt tttggatatg gcagcacttg 1080
taaaaaataa gcagtaagca aaatcctttt aaacacagaa atcctgagtt cttctcattg 1140
gtggactcaa gcaattctgt agcaataaaa tcctttgaaa gagctccaaa aaaaaanaaa 1200
aaaa 1204
```

<210> 250

<211> 1314

<212> DNA

<213> Homo sapiens

<400> 250

```
gcgctccttt cctggcagca ggggtttcaa tgggaggaat gctgcttcta aattacttgg 60
gcaaaattgg gtccaaaacg cctttgatgg cagctgcaac tttttccgtt ggttggaaca 120
ccttcgcttg ctccagagtca ttggaaaaac cactgaactg gctacttttt aattactatt 180
tgacaacctg ccttcagtct tcagttaata agcaccgaca tatgtttgta aaacaagttg 240
atatggatca tgtcatgaag gctaaatcca tcagagagtt tgataagcga ttcacttcag 300
tcatgttttg ataccaaaca attgatgatt attatactga tgccagtccg agtcctagac 360
tgaagtcatg aggaattcca gtattgtgtc taaattctgt ggatgatgtt ttctcaccca 420
gtcatgctat tccaatagaa actgctaagc aaaatcctaa tgttgctttg gtccttactt 480
cttatggagg ccatattggg tttctggagg gaatctggcc aagacagtcc acttacatgg 540
atcgtgtctt caagcaattt gtgcaagcca tgggttagca tggacatgaa ctctcttaac 600
atgtagttct ttgggtgcat tttgtctgaa ccacaattgt gaaggcagct cagcttagtg 660
caciaatttt aactgttgta tataaagcaa ataagccagc agatgggtga agagggtccag 720
aatgatatgc aaaaactact ttttagagaa acaaaacaac tttgtagcaa caaattaaat 780
atagtattag attgttactt acgtagattt tatttttact atgccttacc aagtacatcc 840
ttaaacaag tagtatgtac atgaaattgc acttaaccaa aactattgtg taaaacaaat 900
tttaattcct cagggtttta atttaaacta gtattttttt agattatttg ttttaggtga 960
```

```

tttaatggta ctttaataac tactaagaaa tattggctat ttcaatgtaa gttataaggt 1020
ggtacattcc taagggtatt tatagttgat gataacatga aaactgaaat aagataaaat 1080
acaacgtgct aaatcctttta tgtattctaa ctttaaaaaga caagtgcac aaagttagac 1140
tgacttctat atgtgctctt ttactctgat aatattaaat taggactaac ttatgtttta 1200
taatgattat aatttacatg cttattttta aaatagtata tgtggacaca tatatatcat 1260
tatattaaaa taaattctac catttttaaat tggaaaaaaa aaaaaaaaaa aaaa 1314

```

<210> 251

<211> 1159

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1132)

<223> n equals a,t,g, or c

<400> 251

```

cctgcctcag cctcctcagt agctgggact acaagtgcct gccaccacgc ctgggttatt 60
ttttatatatt ttagtagaga cgggggtttca ctgtgttagc caggatggtc tcgatctcca 120
ggatggtctc gatctccagg atggtctcga tctcctgacg tcgtgatcca cccgcctcgg 180
cctcccaaaa tgctgggatt acaggtgtga gccactgtgc ccggccaaaa gaacagaaat 240
tattttatcc tgaagtaagc tgtttatatt tgggattata ctgaacctat ttgtccaata 300
acctgagttt tcaaataatt ttagttctat aagtactata attatataaa tattaatgaa 360
ttcagattag ctgaaaggaa aaaaagtaga agcctgacta cttggtgcta actactaaag 420
attttggcag aatcaatggt ggatttggtt ttctgtctcc ttcccatgc cagcccccca 480
gagtgttctg ccttgtgctg cctcccttca cckggagtgc cacaccctc tctctgccag 540
ttcagctctt cattcttcaa ggctgacct tgtctgacct ttgtgcctct aaaccctgg 600
gccccacctc tcttgggttc tatgtcaggt gatgtttgtg tttttggtta tgcccatctc 660
catagccaga ccaagcactc tggaagccag ggttgggtgc ttatttatct gtttgccatg 720
cagaaaatat cttgcacaaa attacctctg ttaaggaatc tgaagctgaa tttagtttg 780
ctgagtcagg gttgggtttt ttttaagggg ctgtgggtg aaatgttgac tggaagccac 840
ccacaaacac acacctgctg gtttaggaacc cggctgtggg tggttctgag ctgtttggct 900
tcattgacag tttctgattg ccctgagcac caggtctcat cttgcatctc atcctggcct 960
ggagaacatt cagtttcctt ccaaccctc ccaccttcc cccactccct tggaggaact 1020
gaagttggg ttgaggagag ccagatggct ggagtgggta tttgaaggkc tttctgtcac 1080
ctgttcagt tggtctgcc caccctgct gacmaagact gactgaaatg tnaaataata 1140
cagaccatct caactcaga 1159

```

<210> 252

<211> 2488

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (7)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (64)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2334)

<223> n equals a,t,g, or c

<400> 252

```
tgtatgncca gctggtactc ctgcaggtag cggtccggat tcccgggtcg acccacgcgt 60
ccgnnggacgc gtgggttget cggcagcttg caaagcctga caacaccttg tttgtaaaca 120
gaacactttt tgatcaggtc cttgaattcc tttgtagtcc tgacgatgac tcccgcact 180
ctgaaagaca gcaggtcctt ttagaattgc tgcaggctgg aggcatagtt caatttgaag 240
agagtcgact catccggatg gcagaaaaag ctgagttcta tcaaatttgt gaatttatgt 300
atgaaagaga acaccaatat gacaaaatta ttgattgcyt cttacgtgac cctctgcgag 360
aggaagaagt ctttaattac attcacaata tcttayccat tcccggacac agtgcagagg 420
agaagcagtc tgtatggcag aaagcaatgg atcatattga ggaacycgkg kccctgaagc 480
cttgtaaagc tgcggagctg gttgccaccc acttttctgg acatattgaa acggtcatta 540
aaaaacttca gaaccaggtt ttgcttttca aatttttgag gagtcttctt gacccaaggg 600
aaggatttca tgtaaatcaa gaattactgc aaatatctcc ttgtatcaca gagcagttca 660
ttgagctgtt gtgtcagttc aacccaaccc aagttataga gactctgcaa gtccttgagt 720
gctaccgtct ggaagaaact attcagatta ctcagaagta tcaacttcat gaagtcaccg 780
cttatctatt ggaaaagaaa ggagatattc atggtgcctt cctaataatg ttagagagac 840
tacaaagcaa acttcaagag gtaacacatc aaggtgaaaa taccaaagag gatccctcat 900
tgaaggatgt tgaagatact atggtggaga ccattgctct ttgccagaga aattcacata 960
atgtgaacca gcagcaacgt gagggccctt gggttccgtt attggaggca atgatggccc 1020
ctcagaagct gtccagttca gccattcctc atctacactc tgaagctctg aagtctttga 1080
ccatgcaagt tttaaatagc atggcagcat ttattgccct tccatcaatc ttgcaaagaa 1140
tcttacagga tccagtttat ggaaaaggaa aacttgagaa aatccaggga cttatcttgg 1200
gaatgttaga tacctttaac tatgaacaaa ccctgctgga aacaacaacc agccttytaa 1260
accaagatct ccattggtca ttgtgtaacc tgagagcttc ggtcaccaga ggactgaatc 1320
ccaaacaaga ttaactgctc atatgtttgc agcagtacaa gagacgcaa gaaatggctg 1380
atgaaataat tgtcttttagc tgtggccatt tgtatcactc attctgccta caaaacaaag 1440
aatgcactgt ggaatttgag ggccaaacaa gatggacatg ctacaaatgc agttcaagta 1500
acaaagtagg aaaactcagt gaaaattcat ctgaaattaa aaagggaagg ataaccat 1560
cacaggtaaa aatgtctcca tcgtatcatc agtccaaagg ggatcccact gctaaaaagg 1620
gaacctcaga acctgttctg gatccacagc aaatccaagc atttgatcag ctttgccgtc 1680
tctaccgagg aagctccagg ctggctctcc tcacggaact ctcccagaat cgcagcagcg 1740
agagctatag gccattcagt ggctcgcaga gtgctcctgc tttcaacagc atcttccaga 1800
atgagaactt ccagctgcag ctcattcctc cacctgtgac tgaggattga tgactccatg 1860
gagcctggcc caggagaacc agagatgac ccgaggcagc tggggagagg ccccgccctc 1920
ggtgggcttg gcctccacca cctcccatgc ttctgagaag aggttccaaa ttgggtcctc 1980
gtgcccagag cgtccacagc accattccca gtgtagactc ccagtcttct ccacattgct 2040
gtcatggcgt cagttcacca gactcattga ttttgtttg cttgttaagc aaaggaatgt 2100
cacatacctc tgtccagctt tttaggaat acatttcgcc tattgcgact ttttccattt 2160
accctgaagc ctagaaagta ggtggaactc acacaaatgg cattccagag tctgccatac 2220
tccgtctcct ccagtgctg gataatacag aggaacttca acttctacag ggaacagtgg 2280
ttggccaggc tgcagtataa ctgaagcatg ccttgagag agcagacact gtgnnggcca 2340
gggccaatct cctttaatgt gttcatgtta aaacctatgt gagtgtaaga cttgcccttt 2400
ctaacaataa atgctctgtg ttttaagttc gcaggctctc tggctggctg gctggctctc 2460
agtctgtcaa gtcattggag acatttgc 2488
```

<210> 253
 <211> 1554
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc feature
 <222> (6)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (81)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (1496)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (1523)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (1535)
 <223> n equals a,t,g, or c

<400> 253
 actggnaatc cactactatt tggaaagctg gtccgcctgc aggtaccggt ccggaattcc 60
 cgggtcgacc cacgcgtccg nggacgcgtg gggtctggtt ttgctctagt gtttgggttt 120
 cttcgcggct gctcaagatg aaccgactct tcgggaaagc gaaacccaag gctccgccgc 180
 ccagcctgac tgactgcatt ggcacgggtg acagtagagc agaatccatt gacaagaaga 240
 tttctcgatt ggatgctgag ctagtgaagt ataaggatca gatcaagaag atgagagagg 300
 gtccctgcaa gaatatggtc aagcagaaaag ccttgcgagt tttaaagcaa aagaggatgt 360
 atgagcagca gcgggacaat cttgcccac agtcattcaa catggaacaa gccaattata 420
 ccatccagtc tttgaaggac accaagacca cggttgatgc tatgaaactg ggagtaaagg 480
 aaatgaagaa ggcatacaag caagtgaaga tcgaccagat tgaggattta caagaccagc 540
 tagaggatat gatggaagat gcaaataaaa tccaagaagc actgagtcgc agttatggca 600
 cccagaact ggatgaagat gatttagaag cagagttgga tgcactaggt gatgagcttc 660
 tggctgatga agacagttct tatttggatg aggcagcatc tgcacctgca attccagaag 720
 gtgttcccac tgatacaaaa aacaaggatg gagttctggt ggatgaattt ggattgccac 780
 agatccctgc ttcatagatt tgcattcttc aagcatatct tgtaaaacaa acacatatta 840
 tgggactagg aaatatattat ctttccaaat ttgccataac agatttaggt ttctttcctt 900
 tctttgaagg aaagtttaat tacattgctc ttttattttt tccattaaga gactcattgc 960
 ttgggaaatg ctttcttcgt actaaaattt gattcctttt tttcttatga aaaacgaact 1020
 cagtttaaaa gtatttttag ctcgtatgac ttgttttcat tcattaataa taatttgaaa 1080
 taaaactaag gaaatggaat cttaaaagtc tatgacagtg taactctaca gtctcaaaat 1140

gacctgataa attgataaga caaagatgag attattgggg ctgttcatat tatgattcag 1200
aatcattttc tattgtggta ttatagggtg gttaaagtga tggccttttt gatggggttt 1260
gttgtgtctt gtgaacaagt cgttactgtg tccattattg gaatggaatt atcactactg 1320
tatcatgagt gggatattttg attctatggt tccctcagta ttacatcttg acttgtaatc 1380
aattatgaat atttcttgat atttaatgta taggacattt atttatactc aataaatatt 1440
tttcaaaagg aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaagggggcg cccgcncctag 1500
aggatcccc gagggggggc cangcttacg cgtgncatgc gacgtccaaa gcc 1554

<210> 254

<211> 1506

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (43)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1492)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1501)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1506)

<223> n equals a,t,g, or c

<400> 254

ctggaagaat tcgcgtggca ggagaggcgg ggcaattttg ctnagctttc tcgcgggctt 60
gcagctgcgg caagtgctgg cggcggtgc tcgcgcaagt cagctggcgt gggaactacc 120
ctttgtagct gagaacggct tgtttattgc tacaaagact ctattgacat tggtagcttc 180
agcggcagca gcttcttacg gtataaagct gttgcttcct gaagaggcta caagcatcct 240
tccctaggac tgctgtaagc tttgagcctc tagcaggaga catgcctcgg ggacgaaaga 300
gtcggcgccg ccgtaatgcg agagccgcag aagagaaccg caacaatcgc aaaatccagg 360
cctcagaggc ctccgagacc cctatggccg cctctgtggt agcagacacc cccgaagacg 420
acctgagcgg ccccgaggaa gacccgagca ctccagagga ggcctctacc acccctgaag 480
aagcctcgag cactgcccaa gcacaaaagc cttcagtgcc ccggagcaat tttcagggca 540
ccaagaaaag tctcctgatg tctatattag cgctcatctt catcatgggc aacagcgcca 600
aggaagctct ggtctggaaa gtgctgggga agttaggaat gcagcctgga cgtcagcaca 660
gcatcttttg agatccgaag aagatcgtca cagaagagtt tgtgcgcaga gggtagctga 720
tttataaacc ggtgccccgt agcagtcggg tggagtatga gttcttctg gggccccgag 780
cacacgtgga atcgagcaaa ctgaaagtca tgcattttgt ggcaagggtt cgtaaccgat 840
gctctaaaga ctggccttgt aattatgact gggattcggga cgatgatgca gaggttgagg 900
ctatcctcaa ttcaggtgct aggggttatt ccgccccta agtagatctg aggcagaccc 960
ttgggggtgt aaaagagagt cacaggtacc ccaaggagta gatgccaggg tcctaagttg 1020

```
aaaatgatgt cgattggggg cgggggacac tgtatttgat atttgtgatc agtgatcatt 1080
gttcaactgc gaaatagagt gtttgctttt gataatggaa aattgtattc gttttaaaat 1140
tccgtttgtt gagaataaca atatgtttaa aaatataatt gaacaaattt ttttctttgt 1200
ttcctgtcat tgacatttag tataacagtt ttgctaacgt tctaaaatga agtcgttcca 1260
tcataatcta tgatcttgta cagcacttat agaaataagc tgttcttttg aagttgaaat 1320
acccagtaaa atgttgaaga aggatggagg atttcttcat atctgacgtt tctgaaaccc 1380
tttgtgtctg ctgttgtgtg aagattgaca ttaccatga ttttccttag ttactgcaga 1440
acatagagaa aaataaaaagc ctaacgaata gtaaaaaaaaa aaaaaaaacc tngggggggg 1500
ncccg ncccg 1506
```

<210> 255

<211> 654

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (8)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (632)

<223> n equals a,t,g, or c

<400> 255

```
actcaccnta ttggaaaagc tggtagcct gcaggtccc gtccggaatt cccgggtcga 60
cccacgcgtc cgatctttcc gcgccggtga gtagcactct ctgagagctc caatttcac 120
cgtctgccat cggcgccatc ctgcaatcta agccacaatg gtgcgcatga atgtcctggc 180
agatgctctc aagagtatca acaatgccga aaagagaggc aaacgccagg tgcttattag 240
gccgtgctcc aaagtcatcg tccggtttct cactgtgatg atgaagcatg gttacattgg 300
cgaatttgaa atcattgatg accacagagc tgggaaaatt gttgtgaacc tcacaggcag 360
gctaaacaag tgtggggtga tcagccccag atttgacgtg caactcaaag acctggaaaa 420
atggcagaat aatctgcttc catcccgcga gtttggtttc attgtactga caacctcagc 480
tggcatcatg gaccatgaag aagcaagacg aaaacacaca ggaggggaaa tcctgggatt 540
ctttttctag ggatgtaata catatattta caaataaaat gcctcatgga caaaaaaaaa 600
aaaaaaaaaa aaaaaagggg gsgsgtctag anggtccaag cttacgtacg cgtg 654
```

<210> 256

<211> 1992

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (558)

<223> n equals a,t,g, or c

<400> 256

```
gctcgccata cacctgcgca acgcatgac caccgcgaag aaggaaacat accagtctgt 60
gtacaactgg cagtatgtgc actgcctctt cctgtggtgc cgggtcctga gcactgcggg 120
```

ccccagcgaa scctccagcc cttggtctac ccccttgccc aagtcacatc tggctgtatc 180
aagctcatcc ccactgcccg cttctacccg ctgcgaatgc actgcatccg tgccctgacg 240
ctgctctcgg ggagctcggg ggccttcac cccgtgctgc ctttcatcct ggagatgttc 300
cagcaggtcg acttcaacag gaagccaggg cgcagtagct ccaagcccat caacttctcc 360
gtgatcctga agctgtccaa tgtcaacctg caggagaagg cgtaccggga cggcctggtg 420
gagcagctgt acgacctcac cctggagtac ctgcacagcc aggcacactg catcggttc 480
ccggagctgg tgctgcctgt ggtcctgcag ctgaagtcgt tcctccggga gtgcaagggtg 540
gccaaactact gccggcangt gcagcagctg cttgggaagg ttcaggagaa ctccggcatac 600
atctgcagcc gccgccagag ggtttccttc ggcgtctctg agcagcaggc agtggaagcc 660
tgaggagaagc tgacccggga agaggggaca cccytgacct tgtactacag ccactggcgc 720
aagctgcgtg accgggagat ccagctggag atcagtggca aagagcggct ggaagacctg 780
aacttccctg agatcaaacg aaggaagatg gctgacagga aggatgagga caggaagcaa 840
tttaaagacc tctttgacct gaacagctct gaagaggacg acaccgaggg attctcggag 900
agagggatac tgaggccct gagcactcgg catggggtgg aagacgatga agaggacgag 960
gaggagggcg aggaggacag cagcaactcg gagggtgaat ggtcttgga tgagacca 1020
gacgcagagg cggggctggc ccctggggag ctgcagcagc tggcccaggg gccggaggag 1080
gagctggagg atctgcagct ctccagaggac gactgaggca gccatctgg ggggcctgta 1140
ggggctgccg ggctggtggc cagtgtttcc acctccctgg cagtcaggcc tagaggctgg 1200
cgtctgtgca gttgggggag gcagtagaca cgggacaggc tttattattt attttccagc 1260
atgaaagacc aaacgtatcg agagctgggc tgggctgggc tgggtgtggct gctgaagccc 1320
cacagctgtg ggctgctgaa gtcagctccg cgggggagct gaccctgacg tcagcagacc 1380
gagaccagtc ccagttccag ggggaggcct gcagcccctg gccmmtcca ccacctctgc 1440
cctccgtctg cagacctcgt ccactctgac cmggctctgc yttactccc ccaagtcttt 1500
ggaaatttgt tcttttcctt tgaagtcaca ttttctttta aaattttttg ttttgcaccc 1560
gaaaccgaaa gaaataaagc ggtgggaggc agggccattg tgttgagtgg tgggaagggt 1620
gccgtcctgg ctgcaggacg cctctcggaa agagatgttc acgtcccagt ggggtgtggac 1680
tcttctcttc atgatacggg tgtgaggacc atcctcctgc ttcaagcctg ccgccgccac 1740
aggtggggcc actcccgtcg ctgtcaccat cgctggcaga gaagctggga gttcgctcct 1800
tcttcaggtt ccggggcgga ggcagggcga ctgtcctctt gtctgccagc cgcaccggtt 1860
caccggggag gatattcggc agcccgggca gtcgcagatc ggaggatgca cctgcaggat 1920
ccccttgac ataagcgtct tcagactttt cccttccgag cggaggggag gggccgcgag 1980
ccccaagcgc tg 1992

<210> 257

<211> 2273

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (2271)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2273)

<223> n equals a,t,g, or c

<400> 257

ggcacgagct ggcggggaag gagaggtcag gcgctccggg ctgccccgct aggtcggggc 60
cgcggcgctcc cccaccctaa gtccacctc cggccgggca tgggtacccg ggcggggcctg 120

```

gctcggcctg ggccactca ctggtccaga agcagctgta ggtgccacc aagcccatga 180
cgacgctgct ggccagggtc cagccctatt caggcaggag ctgctcttct ggggtatcgc 240
gatccactta aggatgaggc agacttggtg acaagctggt ctgagcagcg cttccagagc 300
cagaactgag ccagtgaga gcgcaccctg gggcagcctg gattcctggg gtgtccccgg 360
cagccacaca cagccatgca ctacccaact gcactcctct tcctcatcct ggccaatggg 420
gcccaggcct ttcgcatctg cgccttcaat gcccagcggc tgacactggc caaggtggcc 480
agggagcagg tgatggacac cttagttcgg atactggctc gctgtgacat catggtgctg 540
caggaggtgg tggactcttc cggcagcgcc atcccgcctc tgcttcgaga actcaatcga 600
tttgatggct ctgggcccta cagcaccctg agcagccccc agctggggcg cagcacctac 660
atggagacgt atgtgtactt ctatcgggtc caaaaaacac aggtcctgag ttcctacgtg 720
tacaacgatg aggatgacgt ctttgcccg gaggcatttg tggcccagtt ctctttgccc 780
agcaatgtcc tcccagcct ggtgttggtc ccgctgcaca ccactcctaa ggccgtagag 840
aaggagctga acgcccctc c gatgtgtt ctggaggtct ccagcactg gcagagcaag 900
gacgtgatcc tgcttgggga cttcaatgct gactgcgctt cactgacca aaagcgctg 960
gacaagctgg agctgcggac tgagccaggc ttccactggg tgattgccga tggggaggag 1020
accacagtgc gggccagcac ccactgcacc tatgaccg tctgtctgca cggggagcgc 1080
tgccggagtc tgctgcacac tgcggctgct tttgacttcc ccacgagctt ccagctcacc 1140
gaggaggagg ccctcaacat cagtggaccac taccctgtgg aggtggagct gaagctgagc 1200
caggcgaca gcgtccagcc tctcagcctc actgttctgt tgctgctatc actcctgtcc 1260
cctcagctgt gccctgctgc ctgagcgtcc ccctaccccc ccagggcctg ctgccttttg 1320
ggacttaaac cccagcctcc ccctgccatc cagccctggg gctggggggc ttcaactata 1380
gttgccctgt gactgtagtc caccctgcc tgccttggtt gatttggtc ttgttcttg 1440
gttgggcttg tgcctagatt aggagaggaa gccaggggcc ctgcactcat gccacctgcc 1500
aggtagtgtg gtatcaggag tggagacaaa gtgggctctg ggttggggtg ggggaaggga 1560
gggttcagaa agaggaatga agatgttgta tgacaagaag gaaagttact gagaacaaaa 1620
accagattg gtgagatagg acacttggtc agcagatatg ccaatggggc atgtttattg 1680
tggattggta agaataacca ggaaaccatt aagccccaat agctacaagg aggggtggta 1740
atctgctata tcaaaactct tccctgaaac cagcaaacac cgggaaacat tttggctcat 1800
tataatccgg tgaacaatgc agtcaggcct gttataaccg ctgagcagcc acactcgcac 1860
ctcctgggtg ctgtagtctg tgttggtaca ggcttctgca tgcctggtaa agtccagcca 1920
aggctggtca aggcaacatc tccacacaga aaatctgcac cagttatgta agctaaaaag 1980
ctgtgtgaac ccagggtgcc cggaaagggg ctgcaggaca cagcaaatg ccagcagcrt 2040
gccggacccc tcccttccat cctcctctcc aaagaasaga ggtcaggaaa acaactggct 2100
gggacgctag aaggggtcatg tgttaactat aatcacattt atggtttgga accatcaccc 2160
caaggtaaaa aaaaaataaa aggtattccc aggtatgttt ggcaaaataa aataaaggta 2220
attaaaaacc taaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaattttgcn ncn 2273

```

<210> 258

<211> 1504

<212> DNA

<213> Homo sapiens

<400> 258

```

ctgtactctg ccctagattg ttttagcttc tgttctgtaa tcatgagttt ggttggagat 60
attctccata gatgatcttc tactgaaatg cctaaagaag tcacaggctg gcttctgttt 120
tattcaggga tttttttaaa aagtcaatca gaaaagggat actggagctt cttcatgtat 180
gtaacagcat attaaactgg agacagtgat gaatcagcta caaaggtaat attgtattaa 240
aatcatgttt aagatagctg cttttatgtg tattttatat tgcatgcttt tgtaaaaaca 300
tgctgggtga tgaaagatta gttttagaga gaaaatgttc atctgtgcag aggatgcatt 360
ttcttccatt aattctggaa aaaacgttca cagttatata tatggtat ttgcaaaagga 420
ctattaatag aaccttttga gatgaattaa tgtaagaata ttttttaaat aggcttactg 480

```



```

tcaaattgca actttttttt tagatacaga gtggaaaaca gtgctaagtc atttggcacc 540
tccttacaaa tatttttcat ggtcacattt attaaatggt actacatttc tgaatttttg 600
aaaaatgtat tttatcatta aatggcatta ttttaaaggg tgaaaaactg acacagtcaa 660
ttcagaaaaat ggactgaagt ctgaataagg tcattgcatt taaaaagcat ataactgtac 720
ttgactgatg agggaggtgt tactttcatt gtatataggt cttatttcat aaacagatat 780
cctgtatcaa ataaaagtat ttgttatata tttgaagtta tgcattggaaa ggagtgtgtt 840
taaattgtta caaacaataa tgcgtcatta aaggccatgc tgatcttgca taactataag 900
tactatgaat gaatttggtt ggttttggtg ttgtacagct cacatgttta cactcagt 960
gccctaattt cccctgaggg aatcgctttt taagtgatcc ttacagtggg gttttatgtt 1020
actttattac agagctcctt ggttttttac ttctgcactt aaattttttt aaataacatg 1080
atgatggtac attttcctct attgtctagc taagggcttt cgggccacca gtaaataaga 1140
tcaaattgctc ttaaattgttc ctgttaccat cctaattgtaa atactggatt tttctgtcat 1200
ttagcaccat gctgcttctg tctgtcttaa tgctggcatt aagatcatga gccctttttc 1260
tccagtagta caggctttga aaactacttc tattaagtta ttgatgcaat ttgatatttt 1320
ttcataatct atatttaaac aaaattacat cattgcatca tcttttctaa attcatctcc 1380
attaaaactt gccttaagct accagattgc ttttgccacc attggccata ctgtgtgttt 1440
gtttgtttta tttactttca caataaactt ctgtgtagta aaaaaaaaaa aaaaaaaaaa 1500
aaaa

```

<210> 259

<211> 1792

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (107)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (487)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1306)

<223> n equals a,t,g, or c

<400> 259

```

aattcggcac gagctacatc gggggactcc tctcagcctt ctacctgaca ggagaagagg 60
tgttccgaat aaaggccatc aggctgggag agaagctcct gccggcnttc aacaccccca 120
cgggaaatccc aaagggcgtg gtgagcttca aaagtgggaa ctggggctgg gccacagccg 180
gcagcagcag catcttggcg gagtttggtt ccctgcactt ggaattctta cacctcactg 240
aactctctgg caaccaggtc ttcgctgaaa aggtcaggaa catccgcaag gtcctcagga 300
agatcgaaaa gccctttggc ctctacccca acttcctcag cccagtgaat gggaactggg 360
tgcaacacca tgtctcagtt ggaggactcg gggacagttt ttatgaatat ttgatcaaat 420
cctggttgat gtcgggcaag acagatatgg aggtctaaaa tatgtactac gaagccttgg 480
aggcgantag agacctactt gctgaatgty tctcccgggg ggctgacctt cattgccgag 540
tggcgagggg ggattctgga ccacaagatg gggcacctgg cctgtttctc cgggggcatg 600
atcgcccttg gcccgaggat gccaagggaag aaaagagggc ccactaccga gagctcgcag 660

```

```
cccagatcac caagacgtgt cacgagtcac acgcccgcctc agacacccaaa cttgggcctg 720
aggcttctgg tttaactccg gcagagagggc cgtggccacc cagctgagcg agagytacta 780
catcctccgg ccagaggtgg tggagagcta catgtacctg tggcgacaga cccacaaccc 840
catctacagg gagtggggct gggaggtggt gctggccttg gagaaatact gtcggacaga 900
agccggtttc tctgggatcc aagacgtgta cagtagcacc cccaaccacg acaacaagca 960
gcagagcttc tttctagcgg agacactaaa gtatctctat cttctgttct ctgaagatga 1020
cttgctctcc ctggaagact ggggtgttcaa caccgaggcc caccactcc cggatgaacca 1080
ctcagacagc tccggcagag ctggggcaga cactgacccc atctcctgcc gccgccctgg 1140
ggccgccgca ggatgccttg ccttttcagg atttgagact gttctcaaag ggattgggaa 1200
cgaaggcccc atctcgggca gacccccagc agatgtgtcg gacaagcaac ttcttttcct 1260
ctgtgaggag acaagacttg gagactcagc gatgtcaggc cagggncatg gccacactgg 1320
cccacacatt cttttctaca gagaatttct atgaagccca ctcacttgcc attccagggc 1380
caaaggaccg gaggtttgca tatccgcccc ttgtatttga tttgcttcct tttggtttct 1440
tggtttttgt ttttgcttga ttttgctctt tctctacagt ttagttttgt cacaattaca 1500
catatagttt tcaaaatcat gcactttcta aaatggtgtc atcctgaaaa acaaaaccca 1560
gtgtttgcac acacacaaaa tcttgacccc gttatctata ttttaaatgc tttttgcccc 1620
acactgaccc tatgttcaac tttgtgtcat ttacctata atttgaggag gggtttccct 1680
ttgggcctca gtgttacaaa ttactagtgc tattttcatt attattgtaa tggaaaaaatc 1740
tgtggactag aataaaagag tttattgaat aagaaaaaaa aaaaaaaaaa aa 1792
```

<210> 260

<211> 2048

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (66)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (67)

<223> n equals a,t,g, or c

<400> 260

```
atcccttttg atccgggcct gggctgagtg ctccccccgg gcttcaggtg acgcggcccc 60
gcggannttg ggtcgcccga gttgggctgg ggaagccagg gacggaggtg tccggccgctc 120
accctagag gagggcgctgc gggggctctgt ttgcatgcg agccaccctc ctggtctgctc 180
ctgcgggttc cctgtccagg aagaagcggg tggagttgga tgacaactta gataccgagc 240
gtcccgtcca gaaacgagct cgaagtgggc ccagcccag actgcccccc tgcctgttgc 300
ccctgagccc gaggagggcg ggcgggccta ccaggcctgc actgccctac aggcactgag 360
tatacctgca agtgtacccc gtccaggaag ccctggccgt gctggagccc taygcgcggc 420
tgcccccgca caagcatgtg gtcgggcca ctgaggtcct ggctggtacc cagctcctct 480
acgccttttt cactcggacc catggggaca tgcacagcct ggtgcgaagc gccaccgtat 540
ccctgagcct gaggtgcctg tgcctctccg ccagatggcc accgccctgg cgcactgtca 600
ccagcacggg ctggtcctgc gtgatctcaa gctgtgtcgc tttgtcttcg ctgaccgtga 660
gaggaagaag ctggtgctgg agaacctgga ggactcctgc gtgctgactg ggccagatga 720
ttccctgtgg gacaagcacg cgtgccacg ctactctgga cctgagatac tcagctcamg 780
ggcctcatat tcgggcaagg cagccgatgt ctggagcctg ggcgtggcgc tcttcacccat 840
gctggccggc cactaccctc tccaggactc ggagcctgtc ctgctcttcg gcaagatccg 900
```

```

ccgcggggcc tacgccttgc ctgcaggcct ctcggccccct gcccgcgtgc tggttcgctg 960
cctccttcgt cgaggagccag ctgaacggct cacagccaca ggcatcctcc tgcacccctg 1020
gctgcgacag gacccgatgc ccttagcycc aacccgatcc catctctggg aggetgcccc 1080
ggtggtccct gatggactgg ggctggacga agccagggaa gaggagggag acagagaagt 1140
ggttctgtat ggctaggacc accctactac acgctcagct gccaacagtg gattgagttt 1200
gggggtagct ccaagccttc tcctgcctct gaactgagcc aaaccttcag tgccttcag 1260
aagggagaaa ggcagaagcc tgtgtggagt gtgctgtgta cacatctgct ttgttccaca 1320
cacatgcagt tcctgcttgg gtgcttatca ggtgccaaagc cctgttctcg gtgctgggag 1380
tacagcagtg agcaaaggag acaatattcc ctgctcacag agatgacaaa ctggcatcct 1440
tgagctgaca acacttttcc atgaccatag gtcactgtct aactgggta cactttgtac 1500
cagtgtcggc ctccactgat gctggtgctc aggcacctct gtccaaggac aatcccttct 1560
acaaacaaac cagctgcctt tgtatcttgt accttttcag agaaaggag gtatccctgt 1620
gccaaaggct ccaggcctct cccctgcaac tcaggaccca agcccagctc actctgggaa 1680
ctgtrttccc agcatctctg tcctcttgat taagagattc tccttcagg cctaagcctg 1740
ggatttgggc cagagataag aatccaaact atgaggctag ttcttgtcta actcaagact 1800
gttctggaat aggggtccag gcctgtcaac catggggctt ctgacctgag caccaagggt 1860
gagggacagg attaggcagg gtctgtcctg tggccacctg gaaagtccca ggtgggactc 1920
ttctggggac acttggggtc cacaatccca ggtccatact ctaggttttg gataccatga 1980
gtatgtatgt ttacctgtgc ctaataaagg agaattatga aataaaaaaa aaaaaaaaaa 2040
aactcgac 2048

```

<210> 261

<211> 1282

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1244)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1261)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1265)

<223> n equals a,t,g, or c

<400> 261

```

ctcgtgtcgc cgccattttg ccgggggttg aatgtgaggc ggagcggcgg caggagcggg 60
tagtgccagc tacggtccgc ggctgggggt ccctcctccg tttctgtatc cccacgagat 120
cctatagcaa tggaactcag cgatgcaaat ctgcaaacac taacagaata tttaaagaaa 180
acacttgatc ctgatcctgc catccgacgt ccagctgaga aatttcttga atctgttgaa 240
ggaaatcaga attatccact gttgcttttg acattactgg agaagtccca ggataatggt 300
atcaaagtat gtgcttcagt aacattcaaa aactatatta aaaggaactg gagaattggt 360
gaagatgaac caaacaataa ttgtgaagcc gatcgagtgg ccattaaagc caacatagtg 420
cacttgatgc ttagcagccc agagcaaatc cagaagcagt taagtgatgc aattagcatt 480
attggcagag aagattttcc acagaaatgg cctgacttgc tgacagaaat ggtgaatcgc 540

```

```

tttcagagtg gagatttcca tgttattaat ggagtcctcc gtacagcaca ttcattatth 600
aaaagatacc gtcatagaatt taagtcaaac gagttatgga ctgaaattaa gcttggtctg 660
gatgcctttg ctttgccttt gactaatctt ttttaaggcca ctattgaact ctgcagtacc 720
catgcaaatg atgcctctgc cctgaggatt ctgttttctt ccctsatcct gatctcaaaa 780
ttgttctata gtttaaactt tcaggatctc cctgaattht ttgaagataa tatggaaact 840
tggatgaata atthtcatac tctcttaaca ttggataata agctthtaca aactgatgat 900
gaagaggaag ccggcttatt ggagctctta aaatcccaga tttgtgataa tgccgcactc 960
tatgcacaaa agtacgatga agaattccag cgatacctgc ctcgtthtgt tacagccatc 1020
tggaatttta ctagttaaca cgggtcaaga ggthaaatat gatttgthtg taagtaatgc 1080
aattcaatth ctggcttcag tttgtgagag acctcattat aagaatctat ttgaggacca 1140
gaacacgctg acaagtatct gtggaaaagg ttattgtgac taacatggga tttagagctg 1200
ctgatggaag aagcattgaa gtaattctga ggggttacag agngagatt tggaagggtc 1260
nggtnttggc actagacgca gg

```

<210> 262

<211> 599

<212> DNA

<213> Homo sapiens

<400> 262

```

ggcacgagcc ccggcagagg cggargcgga gtcggcctga gaggtctctc gtcgctgcag 60
gcgcctcagc ccagccgcgt gccttgcccc atggccgcct actcttaccg ccccgccct 120
ggggccggcc ctgggcctgc tgcaggcgcg gcgctgccgg accagagctt cctgtggaac 180
gttttccaga gggtcgataa agacaggagt ggagtgatat cagacaccga gcttcagcaa 240
gctctctcca acggcacgtg gactccctth aatccagtga ctgtcaggtc gatcatatcc 300
atgtttgacc gtgagaacaa ggccggcggtg aacttcagcg agttcacggg tgtgtggaag 360
tacatcacgg actggcagaa cgtcttccgc acgtacgacc gggacaactc cgggatgatc 420
gataagaacg agctgaagca ggccctctma gtttcggcta ccggctctct kaccagttcc 480
acgacatcct cattcgaaag kttgacaggc argggacggg gcaratcgsc ttcgacgast 540
taatccaaag ctggcatggc ctgcagaggt ttacggatat attcaaaggt ttcggcacg 599

```

<210> 263

<211> 1261

<212> DNA

<213> Homo sapiens

<400> 263

```

ggcacgaggt tgttcggagc gggcgagcgg agttagcagg gctthtactgc agagcgcgcc 60
gggcactcca gcgaccgtgg ggatcagcgt aggtgagctg tggcctthtgc cgaggtgctg 120
cagccatagc tacgtgcgtt cgctacgagg attgagcgtc tccaccagc aagtgggcaa 180
gaggcggcag gaagtgggta cgcaggggcg caaggcgcac agcctctaga cgactcgctt 240
tccctccggc caacctctga agccgcgtcc tactthtgaca gctgcagggc cgcggcctgg 300
tcttctgtgc ttcaccatct acataatgaa tcccagtatg aagcagaaac aagaagaaat 360
caaagagaat ataaagaata gttctgtccc aagaagaact ctgaagatga ttcagccttc 420
tgcatctgga tctctgttg gaagagaaaa tgagctgtcc gcaggcttgc ccaaaggaa 480
acatcggaat gaccacttaa catctacaac ttccagccct ggggttattg tcccagaatc 540
tagtgaaaat aaaaatcttg gaggagtcac ccaggagtca tttgatctta tgattaaaga 600
aaatccatcc tctcagtatt ggaaggaggt ggcagaaaaa cggagaaagg cgctgtatga 660
agcacttaag gaaaatgaga aacttcataa agaaattgaa caaaaggaca atgaaattgc 720
ccgcctgaaa aaggagaata aagaactggc agaagtagca gaacatgtac agtatatggc 780
agagctaata gagagactga atggtgaacc tctggataat tttgaatcac tggataatca 840

```

```

ggaatttgat tctgaagaag aaactgttga ggattctcta gtggaagact cagaaattgg 900
cacgtgtgct gaaggaactg tatcttcctc tacggatgca aagccatgta tatgaaatgc 960
attaatatatt gactgttgag aattttactg ccgaagttta cctccactag ttctttgtag 1020
cagagtacat aactacataa tgccaactct ggaatcaaat ttccttgttt gaatcctggg 1080
accctattgc attaaagtac aaatactatg tatttttaaat ctatgatggg ttatgtgaat 1140
aggattttct cagttgtcag ccatgactta tgttttattac taaataaact tcaaactcct 1200
gttgaacatt gtgtataact tagaataatg aaatataagg agtatgtgta gaaaaaaaaa 1260
a 1261

```

<210> 264

<211> 1020

<212> DNA

<213> Homo sapiens

<400> 264

```

ctgctcctgg ccaacatcca gtattttatc ttgactgtcc taaccttacc ttagatgcta 60
acagaagggt cctgctcaaa taacactggg tgctatatgt atgggtaaat gtgtacatcc 120
tattccttcc tctttatctc acaatttttg tctccactaa gcaagaagta aactaacact 180
tcgtcactct aaagaaataa ctatgtataa actcttagta accctgtttg tcttcaaatg 240
agtaaataga ccaaagtggg gggacaattt tctagtcttg tagagggaaa aacatctgag 300
tcaacatttt gaaatgcaga ggggtattgg acatgacgac atggaaaagg gcacttttaa 360
acacagctta ctcttcctca agtacagaga gtatatagtg aatcaaaact aactacagcc 420
attcttttta aagcccaagg gatggagcaa aggtgtaagg atgttacctg tttgttttaa 480
tcagagagca aaaagaagtc acaatagttt gggagaaaaa gtagtatggg gagtaagggt 540
atgcgtataa tttcatactg aattttattac tatttgggat gtacgtcart gttctaacaa 600
acactgccaa cacgtcaatt ttttaaaaag cgtggggcac attgctaaga atttgttaaa 660
gcataactgt attttttgtt ttagggcctt attgatgttt tgccgttcca atgtatgcat 720
ttttttactc aataaacttg tcttaatttt agaactgtct gatgatttcg tactggaaag 780
aactactcaa agacggcagt gtaaaagcaa gtcttaggaa agtcccattt tatttgtgtc 840
taacaaacat acaggaactg aaatattttt gttaaatcct gggatgcacc gaagtaactt 900
aaaacaaacc gttcaacagg ttcccccaac cgcccacgcc acataaagaa cagacatatc 960
tacacttgaa aaagtcata cctgtctcag ttctgaaagt cccttaagga ttgcttgctg 1020

```

<210> 265

<211> 571

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (557)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (565)

<223> n equals a,t,g, or c

<400> 265

```

ctttacggca sgmgtccgcg tcgctagcta gtcgttctga agcggcggcc agagaagagt 60
caagggcacg agcatcgggc catgcctttc ttggacatcc agaaaagggt cggccttaac 120

```

221

```
atagatcgat ggttgacaat ccagagtggg gaacagccct acaagatggc tggtcgatgc 180
catgcttttg aaaaagaatg gatagaatgt gcacatggaa tcggttatac tcgggcagag 240
aaagagtgca agatagaata tgatgatttc gtagagtgtt tgcttcggca gaaaacgatg 300
agacgtgcag gtaccatcag gaagcagcgg gataagctga taaaggaagg aaagtacacc 360
cctccacctc accacattgg caaggggggag cctcgccctt gaacagagca gctgctgatg 420
tctggaggct gattttcctg ttctctgttc tccactggaa aggttgttta cgacaaacct 480
ccttgatcaa gtgtgtaaaa ataaaggatt gctccatcct aaaaaaaaaa aaaaaaaaaa 540
aaaatttggg ggggggnccc cgtancccat t 571
```

<210> 266

<211> 1350

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (204)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1313)

<223> n equals a,t,g, or c

<400> 266

```
tgccgccatc gtcgtggggc ttctggggca gctagggctg cccgccgcgc tgcctgcgcc 60
ggaccggggc ggttccagtc ccggggcgcc cgctcgcgga gagaaataac atctgctttg 120
ctgccgagct cagaggagac cccagacccc tcccgagcc agagggctgg agcctgctca 180
gaggtgcttt gaagatgccg gagncccgcc tctgctgttg gcagctgtgt tgcctggcct 240
ggtgctgctg gtggtgctgc tgctgcttct gaggcactgg ggctggggcc tgtgccttat 300
cggttggaac gagttcatcc tgcagcccat ccacaacctg ctcatgggtg acaccaagga 360
gcagcgcac ctagaccayg tgctgcagca tgcggagccc gggaacgcac agagcgtgct 420
ggaggccatt gacacctact gcgagcagaa ggagtgggcc atgaacgtgg gcgacaagaa 480
aggcaagatc gtggacgccg tgattcagga gcaccagccc tccgtgctgc tggagctggg 540
ggcctactgt ggctactcag ctgtgcgcac ggcccgcctg ctgtcaccag gggcgaggct 600
catcaccatc gagatcaacc ccgactgtgc cgccatcacc cagcggatgg tggatttcgc 660
tggcrtgaag gacaagggtca cccttggtgg tggagcgtcc caggacatca tccccagct 720
gaagaagaag tatgatgtgg acacactgga catggtcttc ctcgaccact ggaaggaccg 780
gtacctgccg gacacgcttc tcttgaggga atgtggcctg ctgcggaagg ggacagtgct 840
actggctgac aacgtgatct gccaggtgc gccagacttc ctagcacacg tgcgcgggag 900
cagctgcttt gagtgacac actaccaatc gttcctggaa tacagggagg tggaggacgg 960
cctggagaag gccatctaca agggcccagg cagcgaagca gggccctgac tggccccccc 1020
ggccccctc tcgggctctc tcaccagcc tggactgaa ggtgccagac gtgctcctgc 1080
tgacctctc cggtccggg ctgtgtccta aatgcaaagc acacctcgc gagcctgcgc 1140
cctgacatgc taacctctc gaactgcaac actggattgt tcttttttaa gactcaatca 1200
tgacttcttt actaacactg gctagctata ttatcttata tactaatatc atgttttaaa 1260
aatataaaat agaaattaag aatctaaawa aaawaaaaaa acgggggggcg ctntaaaggg 1320
tccaagctta acgtaagcgt gcatgggaag 1350
```

<210> 267

<211> 1319

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (7)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (61)

<223> n equals a,t,g, or c

<400> 267

```
gcaaganaga aattaaccct cactaaaggg aacaaaagct ggagctccac cgcggtggcg 60
nccgctctag aactagtggg tcccccgggc tgcaggaatt cggcacgaga gactccgcga 120
cctactgacc cggcgactga caggctccaa ctaccggga ctcagtatta gccttcgcct 180
cactggctcc tctgcacaag aggmggcttc cggagtagcc ctcggtgaag cccagacca 240
cagctatgag tcccttcgtg tgacgtctgc gcagaaacat gttctgcatg tccagctcaa 300
ccggcccaac aagaggaatg ccatgaacaa ggtcttctgg agagagatgg tagagtgctt 360
caacaagatt tcgagagacg ctgactgtcg ggcggtgggtg atctctgggtg caggaaaaat 420
gttcaactgca ggtattgacc tgatggacat ggcttcggac atcctgcagc ccaaaggaga 480
tgatgtggcc cggatcagct ggtacctccg tgacatcatc actcgatacc aggagacctt 540
caacgtcatc gagaggtgcc ccaagcccggt gattgctgcc gtccatgggg gctgcattgg 600
cggaggtgtg gaccttgtca ccgcctgtga catccggtag tgtgcccagg atgctttctt 660
ccaggtgaag gaggtggacg tgggtttggc tgccgatgta ggaacactgc agcgctgcc 720
caaggtcatc ggaaccaga gcctggtcaa cgagctggcc ttcaccgccc gcaagatgat 780
ggctgacgag gccctgggca gtgggctggt cagccgggtg tcccagaca aagaggatcat 840
gctggatgct gccttagcgc tggcgccga gatttccagc aagagccccg tggcgtgcag 900
agcaccaagg tcaacctgct gtattcccgc gaccattcgg tggccgagag cctcaactac 960
gtggcgtcct ggaacatgag catgctgcag acccaagacc tcgtgaagtc ggtccaggcc 1020
acgactgaga acaaggaaact gaaaaccgtc accttctcca agctctgaga gccctcgcgt 1080
cccaggcccc agccaggggg ccggccttgt cccgcctcat ccacagaaag ggaggatggg 1140
cgatgacagt tgtttctatg cttctgacc cagtttccca gtttataact ttatgacaat 1200
gagtttctca agcccaaggc cttatcttca cccacaaac aataaagcaa agtaaaagaaa 1260
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaagg ggggggggc 1319
```

<210> 268

<211> 3694

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (746)

<223> n equals a,t,g, or c

<400> 268

```
cggagctgcg ccctgggtgtg caagcactgg taccgctgcc tgcacggcga tgagaacagc 60
gaggtgtggc ggagcctgtg cgcccgagc ctggcagaag aggctctgcy cacggacatc 120
ctgtgcaacc tgcccagcta caaggccaag atacgtgctt ttcaacatgc cttcagcact 180
```

```

aatgactgct ccaggaatgt ctacattaag aagaatggct ttactttaca tcgaaacccc 240
attgctcaga gactgatgg tgcaaggacc aagattgggt tcagtgaggg ccgccatgca 300
tggaagtgt ggtgggaggg ccctctgggc actgtggcag tgattggaat tgccacaaaa 360
cgggccccc tgcatgcca aggttatgtg gcattgctgg gcagtgatga ccagagctgg 420
ggctggaatc tgggtggaaa taatctacta cataatggag aagtcaatgg cagttttcca 480
cagtgaaca acgcaccaa atatcagata ggagaaagaa ttcgagtcac cttggacatg 540
gaagataaga ctttagcttt tgaacgtgga tatgagttcc tgggggttgc ttttagagga 600
cttccaaagg tctgcttata ccagcagtt tctgctgtat atggcaacac agaagtgact 660
ttggtttacc ttggaaaacc tttggacgga tgacagtggc tttcttgtga tgacmgacas 720
aatggaggag agatctgctt atgggnaakt asaaccatga agtgactgtc acacatgcat 780
gtccaagaaa catcctgaaa acacatgaag tcgtaaaactg gagaagcagc tctacagcag 840
agattatctc gtgtttcctc tttctactgg gccagaaaaa tcctcagggg tgcatgtggg 900
tgagtgggca gttgacatat gcatgttgca cccgatgttg tctctaagtt agcaatgtgt 960
tatttccagc tttaaaggtg agattgtaga gatgctgtca aagggataag gaaatagcaa 1020
gatttctttag tagtgtgttt gtgaagactg atccccctt acaactgcct gttctttctc 1080
cagtcctttt tttccagcc agcttgacta ttgaaaaagt atgaaactgg ttgggtttta 1140
tttaataattt ttaatatatt gagaagcatg gtctgcctgg actgcacttc tctaaaagtg 1200
agatataaaa ttgtgcagct attttaaaag ttgtatataa tatgtgtgta aaaaaaaaaa 1260
actgtaaaaa agaaaaggaca aacaggttgt tttgttctag ttctaatttc ttaaaaacca 1320
ctacatggtt acaaaattgg aataacattt tggggggaca actgggttaa ctacaaagaa 1380
gaggatttwa agaggagatg tgttgwattg acycatttkg watwatttw ggcttacagt 1440
tcccatagct gttagagtct ggtttgtttt tgtttttact ctcaaaatca tagtaaagat 1500
ctctcagctc cctggctaaa gattgaagga aggc aaatct atttctaatt atacatatat 1560
cagtaaggat gatctcaaca taatagtaat gtgtatcttt tggatccag ttttattttt 1620
ggccttctaa gaaagtgtct cataacacag aacattgcc a tttgtctctg taggcctcaa 1680
atatgaaagc tattagtcac agagcctagg aaaaaagaa ttgattaatg gtccttttat 1740
tttgtaacct tataaatgct gtagatatta tcaaaaaaat ttaatttca tattgtttac 1800
atcatgcaac taatctaagc ctcaaactcg ttattggggc tataaagaaa acgtttactt 1860
acccagctga aacagggtta gaatatctt aatctcatta tagataattg ccccatggg 1920
acttgaaata caacaccttg tgctgaaaac ttcagggttg gcaatatttg aaggtttcgt 1980
tgtaraagag tttaacatta actcctattt tgacttacaa atcttgtttc tcatcactaa 2040
aatgcttttg aattaataat ccaaccaca tgagctgaga gtttttcttt tgtagaaaa 2100
gaaacagaca tctttctgta tgaaagtata aattgtatgg ttttagatac ataagaattg 2160
acaaaagcga gcgaaatctt tgtacttctg agttcttgct gtatgtatgt tttgttttaa 2220
atctgattag ggacacccag cagctggccg ggattcttg attgctcctt gggagttaag 2280
attgtcaata ctctgtgaa gcaagggtt tcagccatag aacaaagatt tattgttgcc 2340
acctgaaaag tttacaagta tttattgtgt atttgataca ttgcttgaaa agatgaaatc 2400
tgtaaaagat tcttttctgat gtccagggtta agargaaacc tccttgattt gagtgaacta 2460
tatgttaaag gtattagaga atgtaggttg tatagaaatt gatttttctt ggtgtagaac 2520
aactcagttc ggcaaagtgt aaaatttgat taaacaagag aagtgggttca ggttgaagat 2580
ggacttggtt ggaagtgatc aagtccttta agtactgtt tctttttcag gttgtgatgt 2640
ggcattccg aattttgttg agagtgtgt ttataattgt ctcttttctc ttgttagtaa 2700
acattcattht gcaacagttt tgaaggtgct gagtggaaaa ccgaaacaca tggttattgc 2760
gtattggacc tagaatgaaa taattgcctc aatatttaac aacaagccat tcttatctca 2820
aagatttaaa ttcccgaatg tcccattcgc aaatcatatg caattgaagt gagcagcatg 2880
agcatctggg tcatgagggc cttcatttct gtaaatgtt cactaaaacc cagtagtagc 2940
tctacaaaat cttaaactgc tgcagtgtc aaggatagg aatatctttg tcattggtgc 3000
tgaggagagc atttccgttg aagacagttg cgcctgaaga ttgagtgtat atcattcaaa 3060
ccagtgttct tcagtgttgg ctgtatacac tttgtagtca ctttggaatg ttggaagaca 3120
catcgatgct tgggttccgt atgccaagat tctgatgttg gtctggaata tgagctgggtc 3180
ataaggattt ttaaaaactt tctgggtcatt tcaatatgct gccaaagggtg agaaccactg 3240

```



```

ttgtaaaatt caccttgagt tttctcatct gcaaaataga aaaaaaaaaat ccttgctccc 3300
tcccttcact acctcacaag gatattgagg gtaaaggaga aaataatggg aaagtgcttg 3360
tgccgtggat gaaaagtgct attaaaagtc aaaggagtgt tctgtttcaa ttcatagtat 3420
gatcagggaa agtgtaactg agtatacttt gttgacttgg gaaacctgga gcactttctt 3480
tggttggtta acgaagcatg cagatgtgga agcagacgtt actattatcc ctactatggt 3540
cttctgtcat actgagacag gctgttttaa ttacctgggt ttacatagga aagaagaaat 3600
attaaggctt aaagtttgta atgatcaatg gctcataatt cattaaatct tttcatacaa 3660
ggaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 3694

```

<210> 269

<211> 1242

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (4)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (31)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (46)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (460)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1233)

<223> n equals a,t,g, or c

<400> 269

```

ccanccctca ctaaaggga caaaagctgg ngctccaccg cggtnncgac cgctctagaa 60
ctagtggatc ccccgggctg caggaattcg gcaccgcaaa aaaatttaaa aaatacagtg 120
ttttgtattg atatatgtac tgtgtgtgtc tgtgtgtgtg agatcaagat caggttttga 180
ttggtgatgt actattactg ttgtccttgg tcagggaac agaggatgtt tggggtttgg 240
tggtgagaca ttatctaaca cgtgctgtgt cctttttggg tttagagccc acaccagtga 300
gaagcatcag caccgtgaac ttgtctgaga atagcagtgt tgtcatcccc ccaccgact 360
acttggaatg cttatccatg ggggcagytg ccgacaggag agcagattcg gccaggacga 420
catccacctt taaggcccca gcgtccaagc ccgagaccgn ggctcctaac gatgccaacg 480
ggactgcaaa gccgcctttt ctgagcggag aaaaccctt tgccactgtg aaactccgcc 540
cgactgtgac gaatgatcgc tcggcaccca tcattcgatg agaggacagc caaggactct 600
cccgggcctc tccggttctc ccttgcgga tgatgggcgc atcctgtctg ccacgtgctg 660

```

```

acggtcggga agcttcagtg gagaggccta actctaattgt cgcttgctta agcaaatcat 720
gcttctctgt ttcacgtagt tgggttgaca agtttctgcc tttaagataa atgagtaata 780
gtctaattgac cagctcagcc atttaaaata ttttcttctt attctgttca agaaacagta 840
aacttggttt caatctttac tgtatTTTTT aaatgaattt tttccttaat aacagccaga 900
ataagggata gtctatgctt tcaggactgg ctttctgcac ctgatatgaa tgagaccagt 960
tttattttat aaagcatgtg ctcttaatat cattatgtct aaagaagata tcacgtaagt 1020
ttgcatctta gcatgcaaat cataatttta agcaatataa attatgaaaa tactatataa 1080
atgtaattta acttaaaatg ttttaagtgt gagcttccag agrtgggagg aaacccccac 1140
cctccctcca accacgccag agsctgtagg agtgctaagg acgstttgcc tggcccttta 1200
tcacagccac acgtaggcac ytcgacggga atnctccctt cc 1242

```

<210> 270

<211> 2057

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (22)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2053)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2054)

<223> n equals a,t,g, or c

<400> 270

```

cggagcggtt tgtaattgtat tnctggattt tattttgctg tattagctcc tcaagagtta 60
ctgatctatg aaatggcaga gaatggaaaa aattgtgacc agagacgtgt agcaatgaac 120
aaggaaacatc ataattgaaa tttcacagac ccctcttcag tgaatgaaaa gaagaggagg 180
gagcgggaag aaaggcagaa tattgtcctg tggagacagc cgctcattac cttgcagtat 240
tttctctctg aaatccttgt aatcttgaag gaatggayct caaaattatg gcatcgtaa 300
agcattgttg tgtctttttt actgctgctt gctgtgctta tagctacgta ttatgttgaa 360
ggagtgcac aacagtatgt gcaacgtata gagaaacagt ttcttttgta tgcctactgg 420
ataggcttag gaattttgtc ttctgttggg cttggaacag ggctgcacac ctttctgctt 480
tatctgggtc cacatatagc ctcagttaca ttagctgctt atgaatgcaa ttcagttaat 540
tttcccgaac caccctatcc tgatcagatt attgtccag atgaagaggg cactgaagga 600
accatttctt tgtggagtat catctcaaaa gttaggattg aagcctgcat gtgggggtatc 660
ggtacagcaa tcggagagct gcctccatat ttcattggyca gagcagctcg cctctcagg 720
gctgaaccag atgatgaaga gtatcaggaa tttgaagaga tgctggaaca tgcagagtct 780
gcacaagact ttgcctcccg ggccaaactg gcagttcaaa aactagtaca gaaagtggga 840
ttttttggaa ttttggcctg tgcttcaatt ccaaactcct tatttgatct ggctggaata 900
acgtgtggac actttctggt accttttttg accttctttg gtgcaaccct aattggaaaa 960
gcaataataa aaatgcatat ccagaaaatt tttgttataa taacattcag caagcacata 1020
gtggagcaaa tgggtggctt cattggtgct gtccccggca taggtccatc tctgcagaag 1080
ccatttcagg agtacctgga ggctcaacgg cagaagcttc accacaaaag cgaaatgggc 1140

```

```

acaccacagg gagaaaactg gttgtcctgg atgtttgaaa agttggtcgt tgtcatgggtg 1200
tgttactttca tcctatctat cattaaactcc atggcacaaa gttatgccaa acgaatccag 1260
cagcgggttga actcagagga gaaaactaaa taagtagaga aagttttaaa ctgcagaaat 1320
tggagtggtat gggttctgcc ttaaatggg aggactccaa gccgggaagg aaaattccct 1380
tttccaacct gtatcaattt ttacaacttt tttcctgaaa gcagtttagt ccatactttg 1440
cactgacata ctttttcctt ctgtgctaag gtaaggatc caccctcgat gcaatccacc 1500
ttgtgttttc ttaggggtgga atgtgatgtt cagcagcaaa cttgcaacag actggccttc 1560
tgtttgttac tttcaaaagg cccacatgat acaattagag aattcccacc gcacaaaaaa 1620
agttcctaag tatgttaa atgtcaagct ttttaggctt gtcacaaatg attgctttgt 1680
tttcctaagt catcaaaatg tatataaatt atctagattg gataacagtc ttgcatgttt 1740
atcatgttac aattttaatat tccatcctgc ccaacccttc ctctcccatc ctcaaaaaag 1800
ggccatttta tgatgcattg cacaccctct ggggaaattg atctttaaat tttgagacag 1860
tataaggaaa atctggttgg tgtcttacia gtgagctgac accatttttt attctgtgta 1920
tttagaatga agtcttgaaa aaaactttat aaagacatct ttaatcattc caaaaaaaa 1980
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaggaaaa 2040
aaaaaaaaaa aannaaa 2057

```

<210> 271

<211> 960

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (4)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (31)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (951)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (956)

<223> n equals a,t,g, or c

<400> 271

```

aagnatagaa attaaccctc acgtaaaggg nacaaaagct ggagctccac cgcggtgcgg 60
ccgctctaga actagtggat cccccgggct gcaggaattc ggcacgagct cttccacccc 120
tgccaggccc agcagccacc acagcgctg cttcctcggc cctgaaatca tgcccctagg 180
tctcctgtgg ctgggcctag ccctgttggg ggctctgcat gccaggccc aggactccac 240
ctcagacctg atcccagccc cacctctgag caaggctcct ctgcagcaga acttccagga 300
caaccaattc caggggaagt ggtatgtggt aggcctggca gggaatgcaa ttctcagaga 360
agacaaagc cgcgaaaaga tgtatgccac catctatgag ctgaaagaag acaagagcta 420
caatgtcacc tccgtcctgt ttaggaaaaa gaagtgtgac tactggatca ggacttttgt 480

```

tccaggttgc cagcccgggc agttcacgct gggcaacatt aagagttacc ctggattaac 540
gagttacctc gtccgagtggt tgagcaccaa ctacaaccag catgctatgg tgttcttcaa 600
gaaagtttct caaaacaggg agtacttcaa gatcacctc tacgggagaa ccaaggagct 660
gacttcggaa ctaaaggaga acttcatccg cttctccaaa tctctgggcc tccctgaaaa 720
ccacatcgtc ttccctgtcc caatcgacca gtgtatcgac ggctgagtgc acaggtgccg 780
ccagctgccg caccagcccc aacaccattg agggagctgg gagacctcc ccacagtgcc 840
acccatgcag ctgtcccca ggccacccc ctgatggagc cccacctgt ctgctaaata 900
aacatgtgcc ctcaggaaaa aaaaaaaaaa aaaaaaaaaa aagggggggg ncccgntccc 960

<210> 272

<211> 1167

<212> DNA

<213> Homo sapiens

<400> 272

ggcacgaggg aagtaggttt ctaccgacc gcattttacg tgggtgctgca tttccggtag 60
cggcggcggg aaatcggctg tgggagagag gctaggcctc tgaggaggcg aatccggcgg 120
gtatcagagc catcagaacc gccaccatga cggtagggca gagcagcaag atgctgcagc 180
atattgatta caggatgagg tgcacctgc aggacggccg gatcttcatt ggcaccttca 240
aggcttttga caagcacatg aatttgatcc tctgtgactg tgatgagttc agaaagatca 300
agccaaagaa ctccaaacaa gcagaaaggg aagagaagcg agtcctcggg ctggtgctgc 360
tgcgagggga gaatctgggt tcaatgacag tagagggacc tcctcccaaa gatactggta 420
ttgctcgagt tccacttgct ggagctgccg ggggccagg gatcggcagg gctgctggca 480
gaggaatccc agctgggggt cccatgcccc aggtcctgc aggacttgct gggccagtcc 540
gtgggggttg cgggccatcc caacaggtga tgacccaca aggaagaggt actggtgcag 600
ccgctgcagc tgctgccaca gccagtattg ccggggctcc aaccagtag ccacctggcc 660
gtgggggtcc tccccacct atgggccgag gagcaccccc tccaggcatg atggggccac 720
ctcctggtat gagacctcct atgggtcccc caatggggat cccccctgga agagggactc 780
caatgggcat gccccctccg ggaatgcggc ctctcccc tgggatgcga ggccttcttt 840
gaccttggtc cacagagtat ggaagtagct ccgcagaggg gtgggctcga ttcctcaggg 900
ccacgttacc acagacctgt ttgtttctta tgctgttggt cgtggagtct catgggattg 960
tctgggttcc cttacagggc cccctcccc gggaaatgcgc ccaccaaggc cctagactca 1020
tcttgggcct cctcagctcc ctgcctgttt cccgtaaggc tgtacatagt ccttttatct 1080
ccttggtggc tatgaaactg gtttataata aactcttaag agaacattaa aaaaaaaaaa 1140
aaaaactyrr gggggggccc ggtccca 1167

<210> 273

<211> 2771

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (16)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (27)

<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (42)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (64)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (2715)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (2717)
<223> n equals a,t,g, or c

<400> 273

tcctcactaa	agggancaaa	agctggngct	ccaccgcggt	gncgaccgct	ctagaactag	60
tggncccc	gggctgcagg	aattcggcac	gagccsaccc	gcctcttggc	tcctctcctc	120
taggccgtcg	ctttcgggtt	ctctcatcgc	ttcgctcggtc	gccaatgttt	gaggagaagg	180
ccagcagtc	ttcagggaag	atgggaggcg	aggagaagcc	gattgggtgct	ggtgaagaga	240
agcaaaagga	aggaggcaaa	aagaagaaca	aagaaggatc	tggagatgga	ggtcgagctg	300
agttgaatcc	ttggcctgaa	tatatattaca	cacgtcttga	gatgtataat	atactaaaag	360
cagaacatga	ttccattctg	gcagaaaagg	cagaaaaaga	tagcaagcca	attaaagtca	420
ctttgcctga	tggtaaacag	gttgatgcgg	aatcttggaa	aactacacca	tatcaaattg	480
cctgtggaat	tagtcaaggc	ctggccgaca	acaccgttat	tgctaaagta	aataatgttg	540
tgtgggacct	ggaccgccct	ctggaagaag	attgtacctt	ggagcttctc	aagtttgagg	600
atgaggaagc	tcaggcagtg	tattggcact	ctagtgtctca	cataatgggt	gaagccatgg	660
aaagagtcta	tggtggatgt	ttatgtctacg	gtccgccaat	agaaaatgga	ttctattatg	720
acatgtacct	cgaagaaggg	ggtgtgtcta	gcaatgattt	ctcttctctg	gaggctttgt	780
gtaagaaaat	cattaaagaa	aaacaagctt	ttgaaagact	ggaagttaag	aaagaaactt	840
tactggcaat	gtttaagtac	aacaagttca	aatgccggat	attgaatgaa	aaggtgaata	900
ctccaactac	cacagtctat	agatgtggcc	ctttgataga	tctctgccgg	ggtcctcatg	960
ttagacacac	gggcaaaatt	aaggctttta	aaatacacaa	aaattcctcc	acgtactggg	1020
aaggcaaagc	agatatggag	actctccaga	gaatttatgg	catttcattc	ccagatccta	1080
aaatgttgaa	agagtgggag	aagttccaag	aggaagctaa	aaaccgagat	cataggaaaa	1140
ttggcaggga	ccaagaacta	tatttctttc	atgaactcag	ccctggaagt	tgcttttttc	1200
tgccaaaagg	agcctacatt	tataatgcac	ttattgaatt	cattaggagc	gaatatagga	1260
aaagaggatt	ccaggaggta	gtcaccocaa	acatcttcaa	cagccgactc	tggtgacct	1320
cgggccactg	gcagcactac	agcgagaaca	tggtctcctt	tgagggtggag	aaggagctgt	1380
ttgccttgaa	acccatgaac	tgcccaggac	actgccttat	gtttgatcat	cggccaaggt	1440
cctggcgaga	actgcctctg	cggctagctg	attttgggg	acttcatagg	aacgagctgt	1500
ctggagcact	cacaggactc	acccgggtac	gaagattcca	acaggatgat	gctcacatat	1560
tctgtgccat	ggagcagatt	gaagatgaaa	taaaagggtg	tttgattttt	ctacgtacgg	1620
tatatagcgt	atttggattt	tcttttaaac	taaacctttc	tactcgcccg	gaaaaattcc	1680
ttggagatat	cgaagtatgg	gatcaagctg	agaaacaact	tgaaaacagt	ctgaatgaat	1740
ttggtgaaaa	gtgggagtta	aactctggag	atggagcttt	ctatggccca	aagattgaca	1800

```
tacagattaa agatgcgatt gggcgggtacc accagtgtgc aaccatccag ctggatttcc 1860
agttgcccac cagattttaat cttacttatg taagccatga tggatgatgat aagaaaaggc 1920
cagtgattgt tcatcgagcc atcttgggat cagtggaaag aatgattgct atcctcacag 1980
aaaactatgg gggcaaattg cccttttggc tgtcccctcg ccaggtaatg gtagttccag 2040
tgggaccaac ctgtgatgaa tatgcccata aggtacgaca acaattccac gatgccaaat 2100
tcatggcaga cattgatctg gatccaggct gtacattgaa taaaaagatt cgaaatgcac 2160
agtttagcaca gtataacttc atttttagttg ttggtgaaaa agagaaaatc agtggcactg 2220
ttaatatccg cacaagagac aataaggtcc acggggaacg caccatttct gaaactatcg 2280
agcggctaca gcagctcaaa gagttccgca gcaaacaggc agaagaagaa ttttaatgaa 2340
aaaattaccc agattggctc catggaaaag gaggaacagc gtttccgtaa aattgacttt 2400
gtactctgaa aacgtcaatt tatattgaac ttggaggagt ttggcaaagt ctgaataggt 2460
caacctgcag gcgtaactat ttttgacctt gtcagttttt aaacaatgtg catttgaagg 2520
agttaattaa aagagagcca ataaaatgat ttactcatt cagtatctga gtactggaag 2580
tgaaacatga ggaatgcttt agtataatgt gggagaactt ttttgtaaat ttaatgcaat 2640
tgaaaaagtt ttcaaattca attaagataa ctagaattgg attatggtgt aaaaataaaa 2700
aaaaaattta ttcananaaa aaaaaaaaaa aaaaaaaagc tacctcggcc gcgaccacgc 2760
taagccgaat t 2771
```

<210> 274

<211> 1889

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (15)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (57)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (87)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (113)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1676)

<223> n equals a,t,g, or c

<400> 274

```
cacgacgtcc gcggnacggt gggacggaac gcgtgggagg acgcgtgggc ggacgcntgg 60
gttcggaaac ctatcgatta cacagtnctg gatgatgtgg gccatggtgt cangcatgga 120
```

```

aatagaccag cctgcaggaa ctggcacact gtcgagaaca aatcctccta ctcagaaacc 180
gccaaagtcct cccatgtcag gccggggaac actgggacgg aatactcctt ataaaaccct 240
ggaacctgtt aaaccccaa cagttcctaa tgactatatg accagtcctg ctaggcttgg 300
aagtcagcat agtcaggca ggacagcatc tttaaatacag agaccaagga cacacagtgg 360
aagtagtgga ggaagtggaa gtcgagaaaa cagtggtagc agtagtattg gcattcccat 420
tgctgtgcct acaccttcgc caccactat tggaccagca gcccgggct cagctcctgg 480
ttcccagtat ggcaaatga ccaggcagat atctcgacac aactctacta cttcttcgac 540
atcttctggt ggatacagac gaactccctc tgtgactgct caattttctg ctcagcctca 600
tgtaaatgga ggtccacttt attctcaaaa ttcaatttct attgctccac cccctcccc 660
tatgcctcag ttgactccac agatacctct cacaggcttc gtggccaggg tgcaggaaaa 720
cattgctgat agtccaactc caccgccacc acctccacca gatgacattc ccatgtttga 780
tgactctcca cctccccac caccaccacc agtggattat gaagatgagg aggctgcagt 840
agttcagtat aatgatccat atgcagatgg ggatcctgct tgggccccca agaattatat 900
tgagaaagt gttgcaatat atgattatac aaaagacaag gatgatgagc tgtcatttat 960
ggaggggtga atcatttatg ttataaagaa gaatgatgat ggctggtatg aaggagtctg 1020
caatcgagt actggtctgt tccctgggaa ctatgttgaa tcaatcatgc actatactga 1080
ttaattttt ttttctttt gaagtagatt cttattactc agtcatactg tgggactatt 1140
atggttaaca gaactgtctt aatatgtttt aaaatgtgcc catattttca gaacatgctg 1200
ttttattggt aaattgaatg tctacctgta agcataaatc tttgaggcag tttatgtatt 1260
gctgaatagc aatttataga agaagctgtc cataactgat tatgcttatg tacttactta 1320
cacattttta actttatgac cagcctaaat attctggggg aagtggggtg taatatttaa 1380
cgaatcatga ttcagattgt accattacat gtttcagtgc agcatgggta ctaacgctat 1440
gtcagactaa tattaaaaatc agaaaaattta aatgctgggtg ctggtcagac tttttttgtt 1500
agattctctc atttaaaaaa aatactgttt gtttaagca tgcataaaaaa tttatgtatt 1560
gaaatatact taaaaattca agatgcttcc catttggtga atatttacct ggaggactcg 1620
tacttaggtg tcttaacgtg aattgagtct ccaaggctct catgtgaaac aaaagnagca 1680
aaaagagaat tatctgtaat gttgtaattt gtacctaaat tttttaatga gtgaaatttg 1740
cattataaac tttttccatt cataaataca taagtgaacc aaagggtttt gtctcttctc 1800
tcactgattt gctttaaaaa aaataaaaga taatgattta ttgcagaaaa aaaaaaaaaa 1860
aaaaaaaaaa aaaaaataaa aaaaaataaa 1889

```

<210> 275

<211> 604

<212> DNA

<213> Homo sapiens

<400> 275

```

ttttccgggc cacctgggtc ctcagccagt gcctttgaaa catttctgcc tgtaatgtca 60
gggccaatt gcgttactga gcatgttctg accggcccggt ttgggcatca cctgccattc 120
tcctgccatc ctctcaacag ctctgtgggg tgggtcctcc cccatacctg atgcaccgac 180
cacacagtgg aaagtgacaa agccagcgcc ttgccccagg ccccgagggt tggagcccggt 240
ctgctcaggg ttgcaggccc agattctcca ctgctaccga gatcgcccgat atgaggtgct 300
gctgtgctcg gacctggtca aggcatacca gcgctgctg agcgccsccc acaagggtctg 360
aggagcagac atcattccct gccctggcag tgacttgagg ccctgaagaa gggaccaatc 420
atgggaccac agccactgtg ccctgccgtt tcctgctggg cccctgcata tggccctgag 480
cctggggctg ccacgtgttt aggaaacaaa gtatgcgcta ctgtctgaaa acaaaataaag 540
cagatgcctt tgttttcaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 600
aaag 604

```

<210> 276

<211> 1381

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1348)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1349)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1350)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1358)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1359)

<223> n equals a,t,g, or c

<400> 276

```
tccgtggtgt ggttgactct gaggatctgc ccctgaacat ctcccgagaa atgctccagc 60
agagcaaaat cttgaaagtc attcgcaaaa acattgttaa gaagtgcctt gagctcttct 120
ctgagctggc agaagacaag gagaattaca agaaattcta tgaggcattc tctaaaaatc 180
tcaagcttgg aatccacgaa gactccacta accgccgccg cctgtctgag ctgctgcgct 240
atcatacctc ccagtctgga gatgagatga catctctgtc agagtatgtt tctcgcata 300
aggagacaca gaagtccatc tattacatca ctggtgagag caaagagcag gtggccaact 360
cagcttttgt ggagcgagtg cggaaacggg gcttcgaggt ggtatatatg accgagccca 420
ttgacgagta ctgtgtgcag cagctcaagg aatttgatgg gaagagcctg gtctcagtta 480
ccaaggaggg tctggagctg cctgaggatg aggaggagaa gaagaagatg gaagagagca 540
aggcaaagtt tgagaacctc tgcaagctca tgaaagaaat cttagataag aagggttgaga 600
aggtgacaat ctccaataga cttgtgtctt caccttgctg cattgtgacc agcacctacg 660
gctggacagc caatatggag cggatcatga aagcccaggc acttcgggac aactccacca 720
tggtctatat gatggccaaa aagcacctgg agatcaaccc tgaccacccc attgtggaga 780
cgctgcggca gaaggctgag gccgacaaga atgataaggc agttaaggac ctggtggtgc 840
tgctgtttga aaccgccctg ctatcttctg gcttttccct tgaggatccc cagacccact 900
ccaaccgcat ctatcgcata atcaagctag gtctaggtat tgatgaagat gaagtggcag 960
cagaggaacc caatgctgca gttcctgatg agatccccc tctcgagggc gatgaggatg 1020
cgtctcgcata ggaagaagtc gattaggtta ggagttcata gttggaaaac ttgtgccctt 1080
gtatagtgtc cccatgggct cccactgcag cctcgagtgc ccctgtccca cctggctccc 1140
cctgctggtg tctagtgttt ttttccctct cctgtccttg tgttgaaggc agtaaaactaa 1200
gggtgtcaag ccccatcccc tctctactct tgacagcagg attggatgtt gtgtattgtg 1260
gtttatttta ttttcttcat tttgttctga aattaaagta tgcaaaaataa agaatatgcc 1320
```


gttttttatac aaaaaaaaaa aaaaaaannn ggggggggng ccccggtccc matttcccc 1380
c 1381

<210> 277
<211> 1149
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (680)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1088)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1098)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1140)
<223> n equals a,t,g, or c

<400> 277
tcccgggggg gatttttttt tttttttttt tttttttttt tgcttaaaaa aaagccatga 60
cggtctctcc acaattcatc ttccctgccc catctttgta ttatttctaa tttattttgg 120
atgtcaaaag gactgatga agatattttc tctggagtct ccttctttct aaccgggctc 180
tcccgatgtg aaccgagccg tcgtccgccc gccgcccggc ccgcccggc cgccggccgc 240
cccgcagccc accatgtctc gccgcaagca aggcacaccc cagcacttaa gcaaacggga 300
attctcgccc gagcctcttg aagccattct tacagatgat gaaccagacc acggcccgtt 360
gggagctcca gaaggggatc atgacctcct cacctgtggg cagtgccaga tgaacttccc 420
attgggggac attcttattt ttatcgagca caaacggaaa caatgcaatg gcagcctctg 480
cttagaaaaa gctgtggata agccaccttc cccttcacca atcgagatga aaaaagcatc 540
caatcccgtg gaggttggca tccaggtcac gccagaggat gacgattgtt tatcaacgtc 600
atctagagga atttgcccca aacaggaaca catagcagat aaacttctgc actggagggg 660
cctctcctcc cctcgttctn gcacatggag ctctaattccc cagcctggg atgagtgcag 720
aatatgcccc gcaggtattt gtaaagatga gccagcagc tacacatgta caacttgcaa 780
acagccattc accagtgcac gggttctctt gcaacacgca cagaacactc atggattaag 840
aatctactta gaaagcgaac acggaagtcc cctgaccccg cgggttggtg tcccttcagg 900
actaggtgca gaatgtcctt cccagccacc tctccatggg attcatattg cagacaataa 960
cccctttaac ctgctaagaa taccaggatc agtatcgaga gaggcttccg gcctgggcag 1020
aagggcgctt tccacctact cccccctgt ttagtccacc accgagacat cattgggacc 1080
cccaccnat agagcgcntg gggggcggtg aggagatggg cctggggcaa acccttcaan 1140
ccgagttgc 1149

<210> 278

<211> 811

<212> DNA

<213> Homo sapiens

<400> 278

```
ggagaccaga gtgggaggaa ggcggggagt ccagggttccg ccccgaggcc gacttcctcc 60
tggtcggcgg ctgcagcggg gtgagcggcg gcagcggccg gggatcctgg agccatgggg 120
cgcgcgcgcg acgccatcct ggatgcgctg gagaacctga ccgccgagga gctcaagaag 180
ttcaagctga agctgctgtc ggtgccgctg cgcgagggct acgggcgcac cccgcggggc 240
gcgctgctgt ccatggacgc cttggacctc accgacaagc tggtcagctt ctacctggag 300
acctacggcg ccgagctcac cgctaacgtg ctgcgcgaca tgggcctgca ggagatggcc 360
gggcagctgc aggcggccac gcaccagggc tctggagccg cgcagctgg gatccaggcc 420
cctcctcagt cggcagccaa gccaggcctg cactttatag accagcaccg ggctgcgctt 480
atcgcgaggg tcacaaacgt tgagtggctg ctggatgctc tgtacgggaa ggtcctgacg 540
gatgagcagt accaggcagt gcggccgagc ccaccaacc aagcaagatg cggaagctct 600
tcagtttcac accagcctgg aactggacct gcaaggactt gctcctccag gccctaaggg 660
agtccagtc ctacctggtg gaggacctgg agcgagctga ggctccttcc cagcaaacact 720
ccggtcascc ctggcaatcc caccaaatca tcctgaatct gatcttttta tacacaatat 780
acgaaaagcc agcttgaaaa aaaaaaaaaa a                                     811
```

<210> 279

<211> 1260

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1249)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1252)

<223> n equals a,t,g, or c

<400> 279

```
ggtcggcgac agggagggag gaagcctagg agtccgccgc gggacggagg cctgggggaa 60
ctgggagttc agctttctgc agagggccac taggaacctc ggattgccca cggaagccag 120
ccacttitytt tgacagtcca gccacacctc tcttctgccc ggagaagctc caggggytgc 180
ctttktgata acagcatctt cacaaggacc aaaggaaaat aagatttcty gtaagaacac 240
cgtgaccaca tctttaaaat gacctatttc gtggctycca caagatttac acctycacac 300
tgaggccgga agtggttttg cccctataaa acatggcgaa aagctttctt gtctccaagg 360
aaacgccacg taatgagtca aagctgtggc gcacgcgcag aagtacaagc taccggaagt 420
gatggcgccc ctactaaagc cttggggtta gtacgcgtcg cagcagtctc ttccgacagt 480
tgtgtgtgac caatggtgga gaagaaaact tcggttcgct cccaggaccc cgggcagcgg 540
cgggtgctgg accgggctgc ccggcagcgt cgcacaaacc ggcagctgga ggccctggag 600
aatgacaact tccaggatga cccccacgcg ggactccctc agctcggcaa gagactgcct 660
cagtttgatg acgatgcgga cactggaaag aaaaagaaga aaacccgagg tgatcatttt 720
aaacttcgct tccgaaaaaa ctttcaggcc ctgttgaggg agcagaactt gagtgtggcc 780
gagggcccta actacctgac ggctgtgcg ggacccccat cgcggcccca gcgcccttc 840
tgtgctgtct gtggcttccc atccccctac acctgtgtca gctgcggtgc ccggtactgc 900
```

```

actgtgcgct gtctggggac ccaccaggag accagggtgtc tgaagtggac tgtgtgagcc 960
tgggcattcc cagagaggaa gggccgctgt gcaactgccc gccttcagaa agacagaatt 1020
tcatcaccca atgcaggggg agctcttcct ggaccaaggg aggagccgct cattcaccca 1080
acaaaactgt gtcttatctg ccaggaaaga ccagcctcac tcctgggaac tgtctggcag 1140
gtaggctggg cccccagtg ctgttagaat aaaaagcctc gtgccggaaa aaaaaaara 1200
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaant tngggggggg 1260

```

<210> 280

<211> 1668

<212> DNA

<213> Homo sapiens

<400> 280

```

gggaactgcc aaaagtgtgc atttggctac agtggactcg actgtaagga caaatttcag 60
ctgatccctca ctattgtggg caccatcgct ggcattgtca ttctcagcat gataattgca 120
ttgattgtsa cagcaagatc aaataacaaa acgaagcata ttgaagaaga gaacttgatt 180
gacgaagact ttcaaatctt aaaactgctg tcgacaggct tcaccaatct tggagcagaa 240
gggagcgctt ttcctaaggt caggataacg gcctccagag acagccagat gcaaaatccc 300
tattcaagcc acagcagcat gccccgcctt gactattaga atcataagaa tgtggaaccc 360
gccatggccc ccaaccaatg tacaagctat tatttagagt gtttagaaag actgatggag 420
aagtgagcac cagtaaagat ctggcctccg gggttttctt tccatctgac atctgccagc 480
ctctctgaat ggaagttgtg aatgtttgca acgaatccag ctcaactgtc aaataagaat 540
ctatgacatt aaatgtagta gatgctatta gcgcttgta gagaggtggg tttcttcaat 600
cagtacaaag tactgagaca atggttaggg ttgttttctt aattcttttc ctggtagggc 660
aacaagaacc atttccaatc tagaggaaag ctccccagca ttgcttgctc ctgggcaaac 720
attgctcttg agttaagtga cctaattccc ctgggagaca tacgcatcaa ctgtggaggt 780
ccgaggggat gagaagggat acccaccacc tttcaagggt cacaagctca ctctctgaca 840
agtcagaata gggacactgc ttctatccct ccaatggaga gattctggca acctttgaac 900
agcccagagc ttgcaacctt gcctcaccca agaagactgg aaagagacat atctctcagc 960
tttttcagga ggcgtgcctg ggaatccagg aactttttga tgctaattag aaggcctgga 1020
ctaaaaatgt ccactatggg gtgcactcta cagtttttga aatgctagga ggcagaaggg 1080
gcagagagta aaaaacatga cctggtagaa ggaagagagg caaaggaaac tgggtgggga 1140
ggatcaatta gagaggaggc acctgggatc caccttcttc cttagggtccc ctctccatc 1200
agcaaaggag cacttctcta atcatgccct cccgaagact ggctgggaga aggtttaaaa 1260
acaaaaaatc caggagtaag agccttaggt cagtttgaaa ttggagacaa actgtctggc 1320
aaagggtgag agaggagct tgtgctcagg agtccagccg tccagcctcg ggggttaggt 1380
ttctgagggt tgccattggg gcctcagcct tctctggtga cagaggctca gctgtggcca 1440
ccaacacaca accacacaca cacaaccaca cacacaaatg ggggcaacca catccagtac 1500
aagcttttac aaatgttatt agtgtccttt tttatttcta atgccttgtc ctcttaaaag 1560
ttattttatt tgttattatt atttgttctt gactgttaat tgtgaatggg aatgcaataa 1620
agtgcctttg ttagatggaa aaaaaaaaaa aaaaaaaaaa aaaaaaaa 1668

```

<210> 281

<211> 2328

<212> DNA

<213> Homo sapiens

<400> 281

```

ggaaagtgtg tgtgtggcat ggtgtcctat ttgaacgacc tgcccagtca gcgcatccag 60
ccacagcagg tagcagtctg gccaaacctg gtggatatca acagccccga aagcctaacc 120
gaagcatata aactccgtgc agccagatta gtagaaattg ctgcaaaaaa ccttcaaaaa 180

```

```

gaagtgattc acagaaaaag caaggaggta gcttggaaacc taacttctgt tgaccttggt 240
cgagcaagtg aggcacattg ccactatgtg gtagttaagc tcttttcaga aaaactcctc 300
aaaattcaag ataaagccat tcaagctgtc ttaaggagtt tatgtctgct gtattctctg 360
tatggaatca gtcagaacgc gggggatttc cttcagggga gcatcatgac agagcctcag 420
attacacaag taaaccagcg tgtaaaggag ttactcactc tgattcgctc agatgctggt 480
gctttgggtg atgcatttga ttttcaggat gtgacacttg gctctgtgct tggccgctat 540
gatgggaatg tgtatgaaaa cttgtttgag tgggctaaga actccccact gaacaaagca 600
gaggtccacg aatcttacia gcacctgaag tcaactgcagt ccaagctctg aagtgtcaca 660
aggacaagtt taatctgctt cagaaaagcgc ctgtgtgcaa ctcaaatttt gtggaatctt 720
tttcgaattc aaatagctat agagcaaatg ataaattgac ccctttttat aaatggaggg 780
aaaaaatgaa cagatttcag agattaaatg aaaaaagca gatgttttaa gtgcaattaa 840
cactgaaaga gacctgttaa accattcaga aaaagcttaa gaaatgcgat atgacttcct 900
tttgtaatgc tgctgatccc agtagactat gacttttgat aattagcaga atttaactac 960
tgagtagttg attattttca cattttaatt gctaatact ggctatataa gtgtttttta 1020
gcaaaggat ttttgaagt gtgtagaacc cttccaagct ttcctgctca gtgttctacc 1080
agacttacc tggggcctgg cttaaaagca ggattgaaga aaagggactg ggggaaggaa 1140
acttattgga aaacttgat cgaatgagtt tctgcttgcc acagtctctg cctgcttgct 1200
ctcctttgct gatggattgc atttatcaaa ctattcatgc tagcattttt ccaacgaggg 1260
aacttattcc gcacgggcct actgtaggac cattgtctcg tgtaattagg aattttccat 1320
ttgaaggaty gctaaattgt cacagtagta ggaagtatag ggaacctct cagctgtggc 1380
actgttgtag ctttgagtg cagagtgtaa ctctgggaca atcagatttc acatattctg 1440
tcactctggc ataagccatt aaaagcttg agattactgt atttggcatt aaaaaaaaaat 1500
gtcacttagg tcagcactcc cagacgtagc acagaaaaac cctttgacac aaacctgtg 1560
ttctgatttt tgggtcagaa aatattgaaa ctgtgagttg tttttttttt aacaactggg 1620
aaaaaaciaa aacaaaaaac tatagttaga aaaatggaag ttccataggt tctatttctt 1680
actctatgta tggctttgtt ttcagtctat ttctaggagc tttctctgaa tcgctaattg 1740
tcctttcagt tgaatctaa tttatacaat cattctatac ttaaagggtta aatacatctt 1800
aattaatttt ttcttaaagt caatgtaagt cactttgttt tgtttttttt taatctacgc 1860
catatgcctc atgaaaccag ctgttctaga atcagtcctg agaatatggc ttaattccat 1920
ggaaacataa ctcctatctt gggacctgac ataatatcta tctatcctgg ggaactggta 1980
atatgagact tataggttac agcagaaatg ctacatgttg acaaaagcct taatcggtcc 2040
actgggagaa ctaattgata attgtgttaa gattgaagat taaccctgtg ttaatctcac 2100
ttgagtctat cctgacagta gttcagattc tggaaaatga taaactgacc tgctagatgt 2160
agaattgttt caaaattagt gttgaaatac cttgttcaca gatgaatatc tgggcaggat 2220
ctgagggtgt ttggaatgac acccccctaat ccagttgcat agatgggatg tctttgcagg 2280
tttgaggaga tcatcgacct gcagagcccc ctttgacca gtacctca 2328

```

<210> 282

<211> 956

<212> DNA

<213> Homo sapiens

<400> 282

```

ggccgagccc gcgccccca gaccccgaga gctcgcagct ccggccccggc ggcgatggcg 60
cggagctgcg cgtgctgggt gacatggacg gcgtcctggc cgacttcgag gccggcctcc 120
tgcggggctt ccgcgcgcgc ttccttgagg agccgcacgt gccgctggag carcgcgcg 180
gcttcctggc ccgcgagcag taccgcgcgc tgcgccccga cctggcggat aaagtggcca 240
gtgtgtacga agccccgggc tttttcctgg acctggagcc catccccgga gccttggaag 300
ctgtgcggga gatgaacgac ctaccggaca cgaggtctt catctgcacc agccccctgc 360
tgaaagtacca cactgtgtg ggtgagaagt accgctgggt ggagcagcac ctggggcccc 420
agttcgtaga acgaattatc ctgacaaggg acaagacggt ggtcttgggg gacctgctca 480

```

ttgatgacaa ggacacagtt cgaggccagg aggagacccc aagctgggag cacatcttgt 540
tcacctgctg ccacaatcgg cacctggtcc tgcccccgac aaggagacgg ctgctctcct 600
ggagtgacaa ctggagggag atcttagata gcaagcgcgg agctgcgcag cgggaatgag 660
cggggatgcc gcgggcagca gctggagcta aagggaagggc agggccacag gggccaccgc 720
agagccgagt cggggcggca tcgtgctggt gcctctggcc ccgtggagtg gagcaggcag 780
ataccgttaa gcgctgtgct accggcccca ggcccagcca cccggtacct cccgagaggc 840
tgtccctgga ccctggctgg catggaaata cagtgggaaa accagtcggg acctttaata 900
aaagaccttg gctttctaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaat 956

<210> 283

<211> 1402

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (26)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (88)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (97)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (131)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1344)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1355)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1394)

<223> n equals a,t,g, or c

<400> 283

ccccccgccc cccgcacccc cgaaanccag tgaaggtgaa gactccgcgg cccgcgggcg 60

```
tgccaggaga gcggaactgtt tgatgtgntg ccgggggnccg tgcagggggcg agtgggtttcg 120
ggcgggggggg nagaaaaagat ttttttcttc tcttaatcgg aatcgtgatg gtgttggatt 180
atttcaatgg tgggggttaat atagcatgtt atcctgtcta tcttttaaag atttctgtat 240
aagactgttg agcagttttt aaaatagtgt aggataatat aaaaagcaga tagatggcgc 300
tatgtttgat tcctacaacg aaattatcac cagctttttt tcattcttaa ctctttaaag 360
gattcaaacg caactcaaact ctgtgctgga ctttaaaaaa acaattcagg accaaatttt 420
ttctcagtgt gtgtgttttat tccttatagg tgtaaatgag aagacgtgtt tttttccttc 480
accgatgctc catcctcgta tttctttttc cttgtaaatg taatcagatg ccattttata 540
tgtggacgta tttatactgg ccaaacatat tttttctttt gtcccttttt ttctttcctt 600
tctttttact tcctttattt ctttattcct tccttttctt ttttttctt 660
tttttttttg tagttgttgt taccacgccc attttacgtc tccttcactg aagggtctaga 720
gttttaactt ttaatttttt atatttaaact gtagactttt gacactttta aaaaacaaaa 780
aaagacaaga gagatgaaaa cgtttgatta ttttctcagt gtatttttgt aaaaaatata 840
taaagggggg gttaatcggt gtaaatcgct gtttggaatt cctgatttta taacagggcg 900
gctgggtta atctcacaca gtttaaaaaa tcagccccta atttctccat gtttacactt 960
caatctgcag gcttcttaaa gtgacagtat cccttaacct gccaccagtg tccaccctcc 1020
ggccccgctc ttgtaaaaag gggaggagaa ttagccaaac actgtaagct ttttaagaaa 1080
acaaagtttt aaacgaaata ctgctctgtc cagaggcttt aaaactggtg caattacagc 1140
aaaaagggat tctgtagctt taacttgtaa accacatctt ttttgactt tttttataag 1200
caaaaacgtg ccgttttaaac cactggatct atctaatagc cgatttgagt tcgcgacact 1260
atgtactgcg tttttcattc ttgkatttga ctatttaatc ctttctactt gtcgctaaat 1320
ataaatggtt taaggcctaa tggntgsatg atagncataw ggkgtcaggt ttataacttt 1380
gggttaaaaa ttgnaaaagg gg 1402
```

<210> 284

<211> 675

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (20)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (520)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (560)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (618)

<223> n equals a,t,g, or c

<400> 284

acccccctta ggaaaaaagn tggagctcca ccgcggtggc ggccgctcta gactcgagga 60

```
attccagatg cgagcgcggc cgcgggcccc gccgctctgg gcgactgtgc tggcgctggg 120
ggcgctggcg ggcgttggcg taggagggcc caacatctgt accacgcgag gtgtgagctc 180
ctgccagcag tgcctggctg tgagcccat gtgtgcctgg tgctctgatg aggccctgcc 240
tctgggctca cctcgctgtg acctgaagga gaatctgctg aaggataact gtgccccaga 300
atccatcgag ttcccagtga gtgaggcccc agtactagag gacaggcccc tcagcgacaa 360
gggctctgga gacagctccc aggtcactca agtcagtccc cagaggattg cactccgggt 420
ccggccagat gattcgaaga atttctccat ccaagtgcgg cagggtggarg attaccctgt 480
ggacatctac tacttgatgg acctgtctta ctccatgaan ggatgatctg tggarcatcc 540
agaacctggg taccaagctn ggccacccar atgcgaaagc tcaccartaa cctgcgggatt 600
ggcttcsggg catttgtnng acaagcctgt gtcaccatac atgtacctcg tgcgaatttt 660
ggctcagggc aaatt 675
```

<210> 285

<211> 1339

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1330)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1331)

<223> n equals a,t,g, or c

<400> 285

```
gccgcaacct ttccaaggga gtggttgtgt gatcgccatc ttagggaaaa gatgttctcg 60
tccgtggcgc acctggcgcg ggcgaacccc ttcaacacgc cacatctgca gctgggtgcac 120
gatggtctcg gggacctccg ccgccgtgga agagtacagt tgtgaatttg gctccgcgaa 180
gtattatgca ctgtgtggct ttggtggggt cttaagttgt ggtctgacac aactgctgt 240
ggttccccctg gatttagtga aatgccgtat gcagggtggac ccccaaaagt acaagggcat 300
atttaacgga ttctcagtta cacttaaaga ggatgggtgt cgtgggtttgg ctaaaggatg 360
ggctccgact ttccctggct actccatgca gggactctgc aagtttggct tttatgaagt 420
ctttaaaagtc ttgtatagca atatgcttgg agaggagaat acttatctct ggcgcacatc 480
actatatttg gctgcctctg ccagtgtgga attccttgct gacattgccc tggctcctat 540
ggaagctgct aagggttcgaa ttcaaaccga gccagggttat gccaacactt tgagggatgc 600
agctcccaaa atgtataagg aagaaggcct aaaagcatc tacaagggg ttgctcctct 660
ctggatgaga cagataccat acaccatgat gaagttcgcc tgctttgaac gtactgttga 720
agcactgtac aagtttgtgg ttccaaagcc ccgcagtga tgttcaaagc cagagcagct 780
ggttgtaaca tttgtagcag gttacatagc tggagtcttt tgtgcaattg tttctcacc 840
tgctgattct gtggtatctg tgttgaataa agaaaaaggt agcagtgtt ctctggctct 900
caagagactt ggattttaaag gtgtatggaa gggactgttt gcccgatatc tcatgattgg 960
taccctgact gcactacagt ggtttatcta tgactccgtg aaggtctact tcagacttcc 1020
tcgccctcct ccacccgaga tgccagagtc tctgaagaag aagcttgggt taactcagta 1080
gttagatcaa agcaaagtgt gactgaatct gcttgttgat cagtgttgaa gaaagtgcaa 1140
aaggaacttt tatatatttg acagtgtagg aaattgtcta ttctgatata aattactgta 1200
gtactcttgc ttaaggcaag agtttcagat ttactgttga aataaaccca actcttcagt 1260
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1320
aaaaaaaaan naaaaaaaaa 1339
```

<210> 286
<211> 1398
<212> DNA
<213> Homo sapiens

<400> 286
ctctggagcc accagcagaa cctcttcaat atcttgcatg ttacagattt cactgctccc 60
accagcttgg agacaacatg tggttcttga caactctgct cctttgggtt ccagttgatg 120
ggcaagtggg caccacaaag gcagtgatca ctttgagcc tccatgggtc agcgtgttcc 180
aagaggaaac cgtaaccttg cactgtgagg tgcctcatct gcctgggagc agctcyacac 240
agtggtttct caatggcaca gccactcaga cctcgacccc cagctacaga atcacctctg 300
ccagtgtcaa tgacagtggg gaatacaggt gccagagagg tctctcaggg cgaagtgacc 360
ccatacagct ggaaatccac agaggctggc tactactgca ggtctccagc agagtcttca 420
cggaaggaga acctctggcc ttgaggtgtc atgcgtggaa ggataagctg gtgtacaatg 480
tgctttacta tcgaaatggc aaagccttta agtttttcca ctggaattct aacctcacca 540
ttctgaaaac caacataagt cacaatggca cctaccattg ctcaggcatg ggaaagcatc 600
gctacacatc agcaggaata tcwrtcactg tgaaagagct atttccagct ccagtgtgta 660
atgcatctgt gacatcccca ctctggagg ggaatctggt caccctgagc tgtgaaacaa 720
agttgctctt gcagaggcct ggtttgagc ttactttctc cttctacatg ggcagcaaga 780
ccctgcgagg caggaacaca tcctctgaat accaaatact aactgctaga agagaagact 840
ctgggttata ctggtgcgag gctgccacag aggatggaaa tgccttaag cgcagccctg 900
agttggagct tcaagtgcct ggctccagct taccaactcc tgtctgggtt catgtccttt 960
tctatctggc agtgggaata atgtttttag tgaacactgt tctctgggtg acaatacgta 1020
aagaactgaa aagaaagaaa aagtgratt tagaaatctc tttggattct ggtcatgaga 1080
agaaggtaat ttccagcctt caagaagaca gacatttaga agaagagctg aaatgtcagg 1140
aacaaaaaga agaacagctg caggaagggg tgcaccggaa ggagccccag ggggccacgt 1200
agcagcggct cagtgggtgg ccatcgatct ggaccgtccc ctgcccactt gctccccgtg 1260
agcactgcgt acaaacatcc aaaagttcaa caacaccaga actgtgtgtc tcatgggtatg 1320
taactcttaa agcaataaaa tgaactgact tcaactgaaa aaaaaaaaaa aaaaaaaaaa 1380
aaaaaaaaaa aaaaaaaaaa 1398

<210> 287
<211> 926
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (20)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (22)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (896)
<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (917)

<223> n equals a,t,g, or c

<400> 287

```

gaaatccttt ttatctttcn tntttttttt aagggccttt ctaactccgc tgccgccatg 60
gctcctgtga aaaagcttgt ggtgaagggg ggcaaaaaaa agaagcaagt tctgaagttc 120
actcttgatt gcacccaccc tgtagaagat ggaatcatgg atgctgccaa ttttgagcag 180
tttttgcaag aaaggatcaa agtgaacgga aaagctggga accttggtgg aggggtggtg 240
accatcgaaa ggagcaagag caagatcacc gtgacatccg aggtgccttt ctccaaaagg 300
tatttgaaat atctcaccaa aaaatatttg aagaagaata atctacgtga ctggttgccg 360
gtagttgcta acagcaaaga gagttacgaa ttacgttact tccagattaa ccaggacgaa 420
gaagaggagg aagacgagga ttaaatttca tttatctgga aaattttgta tgagttcttg 480
aataaaactt gggaaccaa atggtgggtt atccttggtc gccactcatt tatttgaac 540
agaaaattgg aaatcatagt caaagggtt cccttggttc gccactcatt tatttgaac 600
ttgacttctt ttttttctg cttaaaaatt tcaattctcg tggtaatacc agagtagaag 660
gagaggggtga ctttaccgaa ctgacagcca ttggggaggc agatgcgggt gtggagggtg 720
gggctgaagg tagtgactgt ttgattttaa aaagtgtgac tgtcagttgt atctgttgct 780
tttctcaatg attcagggat acaaattggc ttctctcatt cattaaaaga aaacgcgaca 840
tctttctaag attctctgtg ggaaaatgac tgtcaataaa atgcggggtt ctgggncaaa 900
aaaaaaaaaa aaaaccncgg ggagtc 926

```

<210> 288

<211> 3094

<212> DNA

<213> Homo sapiens

<400> 288

```

agagagctca gatggccctt ttaagggggc tccaagaacc aacatcactg ctcttttaga 60
taaacctctg ccctccactc cttgcttgag tgggttaaag gaactaacag ttgtcccttt 120
aggaggacaa aatgggggtca agaggacaca gaagagttgt atagcaccag attggttcca 180
aatagttaat ggatgtgtgc acattttctg ttcagggtt aagaccagaa tatcagtggg 240
tttgttttcc ccaccaagtg gcctcttaga ctagtcatta acttatgatt agctctaaag 300
atttcaaata gtggcagaca gtgtcttctg aatgtaagtt ttgagaaata cgagtctgtc 360
agagcggcca taagccataa agagtcaatc tcttaattat atttttcatc atgtaaacaa 420
gtttccctatt tccctttctt agattgcacc agtgaaggag atgttttgca aagattcaga 480
gaactaattt ttcactggat aagacctgag taaccagac cccccaccgt ggttcttttc 540
acagccctcg actttgact taaaaaggga tattgtaaat gaaaggctgc agtgccagtt 600
ttaagaaaga atttctgtga agtgtgagga ctctggagtc tagctcatat aaagagagtg 660
ttatataaaa atccgacagc tgaactaggt tgctcttttt tggcaggagg tggggatgag 720
atttgacacc aatattgggca aaattagata accttttggg taatataaat gattttgatt 780
tggaggccta atttgtagat tgtgaaagca gcttttagtt taacttattc acagaccctt 840
tataattacc atgttttttt tttcttccta aatctcttgg ttcagcttgt gaatcttacg 900
tgcccgtaaa gttgggatgt tgaattggct cttctttggt ctggcagtgga gtcaagtgtc 960
cagcattttt tcataagtgt tttttaaaat tgttctccag cattttatgg ctctccctc 1020
ccatgtcctc agaccagca aaagcgtaga ggcagaatta gaggcctctc caggccagct 1080
cctctgcccc atgttcatac aaggtgtgaa tttgagcaca gtccagaat ggagacatcc 1140
caccctcagt tgaataatgg ccattcatg ccaaccttgc caacacggag agggcagaga 1200
tgactagaa gaccttcac ctccccttcc tctgccccaa gtcactacag ttggttctat 1260

```

```

tgaagccagt ctttaagaaa cctggggttaa agacaccagc acttctgctt gctgggctgg 1320
ctggacctgt gaagcmatgg gcaggtagtg cctcttgaga gtcattttat ttggccacct 1380
tcaggtgaga ctatccatag acacatgcta ggataggccc cgctgggagg gcagttacag 1440
gagagagtag gtggtggtga cgtgagggct gtgaaggatc cagagacaag acttagatgt 1500
ttcgttcatt cactcactca ttcagttact cctaagactt ttcagtttca taaggaagag 1560
tgttgcctga ggccctaggg aatattgggg aatagaaggg attgaggaaa catataaat 1620
agttattcaa aagacccaaa tgcttatact tctctctccc ttcttctctc tctgacacac 1680
acacacacac acacacacac acacacacac gtgcacattc ctcccttaca tgctcatttg 1740
tgccttaaat gtgccttata ggtaaatcca ggatgactga ggaatccctc gtcactggga 1800
gattttgtat atattctttt attattagat tgagttgggt gtggggaaaa atttttttct 1860
gaaggctcaa aagtggtttc ctaaaagtga gccactatca gatttgcaca tcaggagaaa 1920
agaaataggg ttacgtccat taggaaaatc ccagtttgca ggagtgcaat cacatcaaaa 1980
aaacaaccag ccaggattaa aggtattata aatcctcata gcggaacatt tctcagggca 2040
aaggaacctg gctcatttga agattaatgt tccatgcctt tgtggtcaaa sggtcagcac 2100
ttaacacagg aaaaaactag gtgttgtttt gttttgttat tttggacaac ataaaaattca 2160
ggaatgtttt atttagcctt ggtttctaga aggaagggaa ataatatctt ttgagcattt 2220
actagggtgt tgcgtgctgt gctaagtaaa ttttaagtct ttcagtttta tagatacggg 2280
aaacaagggt gactctttac cacaggatga ataaagaact aagtaatatg ggaaatgcag 2340
caatttctgg actagctgag ccgattcctt cctgtgagca cactgtaagc tttcaagttc 2400
tctgggcag aattacagca cctgtcccct gcaatggccc tgctgtgtga tgctcatcgc 2460
ttcccttcgt gctggagcag tccccaggt gtccatctcc tatctttttg ttccaatctt 2520
ctgtgagttc cagctagcag gctttacatc tggggaaagg aaaaccaggg gttttagctc 2580
tgttctctgc tcccatcctt cgctcaccag ctgagtgaga acatgaactt tttgcaccat 2640
gtacccatgg cttacactac ttagaaaatc accttttcag ataaaacagt ttatgagttc 2700
atagagaaca ccagcactct ttgacaaaac tgtgagtga ccttttttaa caatgctgag 2760
caggccctga gctataatca acggtgagct ttaatgtcta tgctgacagt taggttttgc 2820
tctcttttgt aacaggttac gtagaccagc agtggtttaa tctaaatacg ttgtgagtct 2880
gttatctgtc ctatcgcgtt ttttaaatga ctttttattc tttatcatag ctaagtaaat 2940
acaaaaaaa aaaaaaagct ttgtaggaca cttgtactta gtttgggaaa aaaaaataaa 3000
ttgaaattgt tatgcttttg tatttccatt tcttgcaaat aaatatTTTT tcttaaatag 3060
taagatgttg cccagtcttt ataattcttg tact 3094

```

<210> 289

<211> 1983

<212> DNA

<213> Homo sapiens

<400> 289

```

gacctcagag gagtcaaggc cccgcctgtc ccagctgtct gtgactgacg tgaccaccag 60
ttcactgagg ctcaactggg agggccacc gggggccttc gactccttcc tgctccgctt 120
tggggttcca tcaccaagca ctctggagcc gcacccgctt ccactgctgc agcgcgagct 180
gatggtgccg gggacgcggc actcggccgt gctccgggac ctgctgtccg ggactctgta 240
cagcctgaca ctgtatgggc tgcgaggacc ccacaaggcc gacagcatcc agggaaccgc 300
ccgcaccctc agcccagttc tggagagccc ccgtgacctc caattcagtg aaatcaggga 360
gacctcagcc aaggtcaact ggatgcccc accatcccgg gcggacagct tcaaagtctc 420
ctaccagctg gcggacggag gggagcctca gagtgtgcag gtggatggcc agggccggac 480
ccagaaactc caggggctga tcccaggcgc tcgctatgag gtgaccgtgg tctcggtcgc 540
aggctttgag gagagtgagc ctctcacagg attcctcacc acggttcctg acgggtccac 600
acagttgcgt gcactgaact tgaccgagg attcgcctg ctgcaactga agcccccca 660
gaatcctgtr gacacctatg acrtccaggt cacagccctt ggggccccgc ctctgcaggc 720
ggagacccca ggcagcgcgg tggactacce cctgcatgac cttgtcctcc acaccaacta 780

```

caccgccaca gtgcgtggcc tgcggggccc caacctcact tccccagcca gcatcacctt 840
caccacaggg ctagaggccc ctcgggactt ggaggccaag gaagtgaccc cccgcaccgc 900
cctgctcact tggactgagc ccccagtcg gcccgaggc tacctgctca gcttcacac 960
ccctgggtgga cagaccagag agatcctgct cccaggagg atcacatctc accagctcct 1020
tggcctcttt ccctccacct cctacaatgc acggytccag gccatgtggg gccagagcct 1080
cctgccgccc gtktccacct ctttcaccac ggggtgggctg cggatcccct tccccaggga 1140
ctgcggggag gagatgcaga acggagccgg tgcctccagg accagcacca tcttcctcaa 1200
cggcaaccgc gagcggcccc tgaacgkkt ttgcgacatg gagactgatg gggcgggctg 1260
gctggtgttc cagcgycgca tggatggaca gacagacttc tggagggact gggaggacta 1320
tgcccatggt tttgggaaca tctctggaga gttctggctg ggcaatgagg ccctgcacag 1380
cctgacacag gcagggtgact actccatgcg cgtggacctg cgggctgggg acgaggctgt 1440
gttcgcccag tacgactcct tccacgtaga ctcggtgctg gagtactacc gcctccactt 1500
ggagggttac caccgcaccg cagggactcc atgagctacc acagcggcag tgtcttctct 1560
gcccgtgatc gggaccccaa cagcttgctc atctcctgcg ctgtctccta ccgaggggccc 1620
tgggtgttaca ggaactgcca ctacgccaac ctcaacgggc tctacgggag cacagtggac 1680
catcagggag tgagctggtt ccaactggaag ggcttcgagt tctcgggtgcc cttcacggaa 1740
atgaagctga gaccaagaaa ctttcgctcc ccagcggggg gaggtgagc tgctgcccac 1800
ctctctcgca ccccagtatg actgccgagc actgaggggt cgcgccgaga gaagagccag 1860
ggtccttcac caccagccg ctggaggaag ccttctctgc cagcgatctc gcagactgt 1920
gtttacaggg gggaggggag gggttcgtac gggagcaata aaggagaaac tgaggtaccc 1980
gga

<210> 290

<211> 1298

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1224)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1231)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1242)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1262)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1285)

<223> n equals a,t,g, or c

<400> 290

```
gaaggacagc agaccagaca gtcacagcag ccttgacaaa acgttcctgg aactcaagct 60
cttctccaca gaggaggaca gagcagacag cagagaccat ggagtctccc tcggccccctc 120
cccacagatg gtgcatcccc tggcagaggc tcctgctcac agcctcactt ctaaccttct 180
ggaacccgcc caccactgcc aagctcacta ttgaatccac gccgttcaat gtcgcagagg 240
ggaaggaggt gcttctactt gtccacaatc tgccccagca tctttttggc tacagctggt 300
acaaaggtga aagagtggat ggcaaccgtc aaattatagg atatgtaata ggaactcaac 360
aagctacccc agggcccgca tacagtggtc gagagataat atacccaat gcatccctgc 420
tgatccagaa catcatccag aatgacacag gattctacac cctacacgtc ataaagtcag 480
atcttgtgaa tgaagaagca actggccagt tccgggtata cccggagctg cccaagccct 540
ccatctycag caacaactcc aaacccgtgg aggacaagga tgctgtggcc ttcacctgtg 600
aacctgagac tcaggacgca acctacctgt ggtgggtaaa caatcagarc ctcccgtgca 660
gtcccaggct gcagctgtcc aatggcaaca ggacctcac tctattcaat gtcacaagaa 720
atgacacagc aagctacaaa tgtgaaaccc agaaccagc gagtgccagg cgcagtgatt 780
cagtcacctc gaatgtcctc tatggcccg atgccccac catttcccct ctaaacacat 840
cttacagatc aggggaaaat ctgaacctct cctgccacgc agcctctaac ccacctgcac 900
agtactcttg gtttgtcaat gggactttcc agcaatccac ccaagagctc tttatcccca 960
acatcactgt gaataatagt ggatcctata cgtgccaaag ccataactca gacactggcc 1020
tcaataggac cacagtcacg acgatcacag tctatgcaga gccacccaaa cccttcacat 1080
ccagcaacaa ctccaacccc gtggaggatg aggatgctgt agccttaacc tgtgaacctg 1140
agattcagaa cacaacctac ctgtggtggg taaataatca gagccttccg gtcagtccca 1200
ggctgcactt gccaatgaca acangaccct nactctactc antggcacia ggaatgatgt 1260
angaccctat gaatgtggaa tccanaacaa attaagtg 1298
```

<210> 291

<211> 2459

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (3)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (4)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1604)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1605)

<223> n equals a,t,g, or c

<220>

<221> misc feature
<222> (2374)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (2392)
<223> n equals a,t,g, or c

<400> 291
cgnnccacgc gtccgcagca rggccaacag tcacagcagc cctgaccaga gcattcctgg 60
agctcaagct ctctacaaag aggtggacag agaagacagc agagaccatg ggacccccct 120
cagcccctcc ctgcagattg catgtccctt ggaaggaggt cctgctcaca gcctcacttc 180
taaccttctg gaaccacccc accactgcc aagtcactat tgaatccacg ccrttcaatg 240
tcgcagaggg gaaggagggt cttctactcg cccacaacct gccccagaat cgtattgggt 300
acagctggta caaaggcgaa agagtggatg gcaacagtct aattgtagga tatgtaatag 360
gaactcaaca agctacccca gggcccgcat acagtggctg agagacaata taccccaatg 420
yatccctgct gatccagaac gtcacccaga atgacacagg attctatacc ctacaagtca 480
taaagtcaaga tcttgtgaat gaagaagcaa ccggacagtt ccatgtatac ccggagctgc 540
ccaagccctc catctccarc aacaactcca accccgtgga ggrcaaggat gctgtrgcct 600
tcacctgtga acctgagggt cagaacacaa cctacctgtg gtgggtaaat ggtcagagcc 660
tcccggtcag tcccaggctg cagctgtcca atggcaacat gaccctcact ctactcagcg 720
tcaaaaggaa cgatgcagga tcctatgaat gtgaaataca gaaccacagc agtgccaacc 780
gcagtgaccc agtcaccctg aatgtcctct atggcccaga tggccccacc atttccccct 840
caaaggccaa ttaccgtcca ggggaaaatc tgaacctctc ctgccacgca gcctctaacc 900
cacctgcaca gtactcttgg tttrtcaatg ggackttcca gcaatccacm caagagctct 960
ttatcccaa catcactgtg aataatagtg gatcctatac gtgccaagcc cataactcag 1020
acactggcct caataggacc acagtcacga cgatcacagt ctatgcagag ccacccaaac 1080
ccttcacac cagcaacaac tccaaccccg tggaggatga ggatgctgta gccttaacct 1140
gtgaacctga gattcagaac acaacctacc tgtgggtggg aaataatcag agcctcccgg 1200
tcagtcccag gctgcagctg tccaatgaca acaggaccct cactctactc agtgtcacia 1260
ggaatgatgt aggaccctat gagtgtggaa tccagaacga attaagtgtt gaccacagcg 1320
accagtcac cctgaatgtc ctctatggcc cagacgaccc caccatttcc ccctcatata 1380
cctattaccg tccaggggtg aacctcagcc tctcctgcca tgcagcctct aacctacctg 1440
cacagtattc ttggctgatt gatgggaaca tccagcaaca cacacaagag ctctttatct 1500
ccaacatcac tgagaagaac agcggactct atacctgcca ggccaataac tcagccagtg 1560
gccacagcag gactacagtc aagacaatca cagtctctgc gganntgccc aagccctcca 1620
tctccagcaa caactccaaa cccgtggagg acaaggatgc tgtggccttc acctgtgaac 1680
ctgaggctca gaacacaacc tacctgtggg gggtaaatgg tcagagcctc ccagtcaatc 1740
ccaggctgca gctgtccaat ggcaacagga ccctcactct attcaatgtc acaagaaatg 1800
acgcaagagc ctatgtatgt ggaatccaga actcagtga tgcacaaccg agtgaccag 1860
tcacctgga tgtcctctat gggccggaca ccccatcat tccccccca gactcgtctt 1920
acctttcggg agcgaacctc aacctctcct gccactcggc ctctaaccba tccccgcagt 1980
attcttggcg tatcaatggg ataccgcagc aacacacaca agttctcttt atcgccaaaa 2040
tcacgcaaaa taataacggg acctatgcct gttttgtctc taacttggct actggccgca 2100
ataattccat agtcaagagc atcacagtct ctgcatctgg aacttctcct ggtctctcag 2160
ctggggccac tgtcggcatc atgattggag tgcgtgggtg ggttgctctg atatagcag 2220
cctgggtag tttcttcatt tcaggaagac tgacagttgt tttgcttctt ccttaaagca 2280
tttgcaacag ctacagtcta aaattgcttc tttaccaagg atatttacag aaaagactct 2340
gaccagagaa tcgagaacca tcctagccaa catngtgaaa acccatctg tnactaaaaa 2400
tacaaaaatg agctgggctt tgtggcgcgc acctgttagt ccccgtaaat ttggggagg 2459

<210> 292
<211> 570
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (567)
<223> n equals a,t,g, or c

<400> 292
aatcggcac gmgccggagt gtggtacttc tcctagtgtgc agtcaggctt catacgctat 60
tgtcctgccc gttagagcag ccagcgggta cagaatggat tttggaagag ggagtcacca 120
ctggacctcc aaggaagcca cgtgcagaca tctacaacct tcgatctcct gacgagttta 180
ttgttggtcc aaaccaggct ttgattgaac caggatgaat gcgggtgttg gaagtagaat 240
atatatatac atataaaatt ggttgggagc cacgtgtacc agtgtgtgtt gatcttggct 300
tgattcagtc tgccttgtaa cagaaactgg cgatggaata tgagaggagc cctctgaaa 360
gaaaaggaca gacctgtgc tttcatgaaa gtgaagatct ggctgaacca gttccacaag 420
gttactgtat acatagcctg agtttaaaag gctgtgcccc cttcaagaat gtcattgtta 480
gactttgaaa tttctaactg cctacctgca taaagaaaat aaaatctttt aaatcaaaaa 540
aaaaaaaaaa raagggggcc gctctanagg 570

<210> 293
<211> 2468
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (2076)
<223> n equals a,t,g, or c

<400> 293
gggtttgaga agattggaca gtgcttcagg caccgtgtac acagcaatgg atgtggccac 60
aggacaggag gtggccatta agcagatgaa tcttcagcag cagcccaaga aagagctgat 120
tattaatgag atcctgggtca tgagggaaaa caagaaccca aacattgtga attacttgga 180
cagttacctc gtgggagatg agctgtgggt tgttatggaa tacttggttg gaggctcctt 240
gacagatgtg gtgacagaaa cttgcatgga tgaaggccaa attgcagctg tgtgccgtga 300
gtktctgcag gctctggagt tcttgcatc gaaccagata accccagagc agagcaaacg 360
gagcaccatg gtaggaacct catactggat ggcaccagag gttgtgacac gaaaggccta 420
tgggcccaag gttgacatct ggtccctggg catcatggcc atcgaaatga ttgaagggga 480
gcctccatac ctcaatgaaa accctctgag agccttgtac ctcatgcca ccaatgggac 540
cccagaactt cagaaccag agaagctgtc agctatcttc cgggactttc tgaaccgctg 600
tctcgagatg gatgtggaga agagagggtc agctaaagag ctgtacagc atcaattcct 660
gaagattgcc aagcccctc ccagcctcac tccactgatt gctgcagcta aggaggcaac 720
aaagaacaat cactaaaaac acactcacc cagcctcatt gtgccaagcc ttctgtgaga 780
taaatgcaca tttcagaaat tccaactcct tgatgccctt tctccttgcc ttgcttctcc 840
catttctga tctgacact ctcaagactt tgatcccttg aaaccgtgtg tccagcattg 900
aagagaactg caactgaatg actaatcaga tgatggccat ttctaaataa ggaatttcct 960
cccaattcat ggatatgagg gtggtttatg attaagggtt tatataaata aatgtttcta 1020

```

gtcttccgtg tgtcaaaatc ctcacctcct tcataaccat ctcccacaat taattcttga 1080
ctatataaat ttatggtttg ataattattat caatttgtaa tcaattgaga tttcttttagt 1140
gcttgctttt ctgtgactca actgcccaga cacctcattg tacttgaaaa ctggaacagc 1200
ttgggaatgc catggggttt gataatctgc cagggacatg aagaggctca gcttcctgga 1260
ccatgacttt ggctcagctg atcctgacat gggagaacaa ccacattttt ctttgtgtgt 1320
gcttctagca gctgttcggg aggaccttga cccaayagtg ttcccatgct gtttcttgtg 1380
aaatgctctc ggctatgtag cagcttttga ttccctgcat accctaggct gctgccccta 1440
tcctgtccct tgtttataac attgagaggt tttctagggc acatactgag tgagagcagt 1500
gttgagaagt cggggaaaat ggtgactact tttagagcaa ggctgggcat cagcacctgt 1560
ccagctctac ttgtgtgatg tttcaggaac tcagcccctt tttctgccta ggataaggag 1620
ctgaaagatt aacttgatc ttctaattgg ccaaattctt tggtcacaat aaagagtctc 1680
caaattagag actgcatgtt agttctggat ggatttgggt gcctgacatg ataccctgcc 1740
agctgtgagg ggaccccggt ttttaagatgc atggccaagc tctctgcaa tggaatgct 1800
tacctgggtt gttggggatg tttgctacct cctgctattt ttgtggtttt gttctccca 1860
ctatggtagg acccctggcc agcattgttg cttgtcatgt cagccccatt gactaccttc 1920
tcatgctctg aggtactact gcctctgcag cacaatttct tatttctgtc aataaaagga 1980
gatgaaaaa ttctattgga gtatgccttt ctttttctc ttcgtttttt ctttcctttt 2040
ctaatttttt atatgaaata atgagtaagt ttcttntcga accatttgag agtggttaagt 2100
tgcagataga atgccccttt accactatat acctgaatgt gtattctttc yttttaacac 2160
ttttatttta aatataaatt aagagaaatg ggccaaaacc atttgatttg tttaaagaat 2220
aattataaac acacttgtat ccaccaaadc aagaaakgga aactgacag taagaacctt 2280
ctctatcttg tccttccttt ctcatatag ccccccaccta agaggtaacc accatcttga 2340
cttttatttta aataactttc ttgcttttct gtatactttc atcacattca ggtgtgttcc 2400
aatacaagta gatttttagt cggccagttt ttgaacttta aataaacata tcataataga 2460
taaaaaaa 2468

```

<210> 294

<211> 1080

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1038)

<223> n equals a,t,g, or c

<400> 294

```

ctcgtgccga attcggcacg agcccacggg cccggcgcca tgagtgttgc cgcttcctgg 60
atgacaacca aatcatcacc agctctgggg ataccacctg tgccctgtgg gacattgaga 120
caggccagca gacagtgggt tttgctggac acagtgggga tgtgatgtcc ctgtccctgg 180
ccccgatgg ccgcacgttt gtgtcaggcg cctgtgatgc ctctatcaag ctgtgggacg 240
tgcgggattc catgtgccga cagaccttca tcggccatga atccgacatc aatgcagtgg 300
ctttcttccc caacggctac gccttcacca ccggctctga cgacgccacg tgccgcctct 360
tcgacctgcg ggccgatcag gagctcctca tgtactccca tgacaacatc atctgtggca 420
tcacctctgt tgcttctcgc cgcagcgacg gctgctgtc gctggctacg acgacttcaa 480
ctgcaacatc tgggatgcc a tgaagggcga ccgtgcagga gtcctcgctg gccacgacaa 540
ccgcgtgagc tgccctgggg tcaccgacga tggcatggct gtggccacgg gctcctggga 600
ctccttctc aagatctgga actaatggcc ccacccccac tgggcccagg ccaggagggg 660
ccctgcccc gccacacta caggccaggc ctgcggggct ggcgcaatcc cagccccctt 720
ccccgggcca cggggccttg ggtccctgcc ctcccacca ggtttggttc ctcccggggc 780
ccccactgtg gagataagaa ggggatggaa tgggggaaga ggaggagcag gaggccctca 840

```

```

tccttctgct gccctggggt tggggcctca cccctctgga gggccggagg caggaggtgg 900
aaaccccagg ggctggcttt tttaaaactg gttttatttt aatttttatt atattttcag 960
tttttccata aaggagccaa ttccaactct gwaaaaaaaa aaaaaaaaaa acttcgrggg 1020
ggggcccgtg cccaattngc ctttaggggg ggggtttaat taatggcggg gttttaaaag 1080

```

<210> 295

<211> 2695

<212> DNA

<213> Homo sapiens

<400> 295

```

tcatgattcc aagctaaagg aaattaaaaa tgtaatttaa taatttccta tttttagggg 60
tgtaattttt tttctacaaa aaaaccttga aatttttagat atcccaatgt gaatctaatt 120
tccatatata cagaaattag acaaataata agtcttttagt tcaacttaag catatctcaa 180
atgacttctc taaattttaa gttgatcatg ataggatcat aaaagacaga aaagacttaa 240
gtaatcttgt aatgacaatt atttccattt ttgctgaact aaaaatattt aacttcataa 300
atatgttact acagcttcca gatttaaaga aaaaagttt cccccactct caattaaaag 360
ttagaaccct ccacttttaa aattatacaa atatttcttt tttacattac acagaagcct 420
tctgtaccat ttacgaatt tctgtcttca taataaagt gaaaatactg tcatttcaat 480
tttctgcttt aaattgtttt taataagcat yccaaagtga tacagactta agcttttaat 540
caatcagtca ttcagttgat agacaaagtt agcgatgctt tatgctagga aacttggtga 600
cagtaacctg tgcgacttta tgcagaagac aaatgctagt aattattatg cacagaggaa 660
aaatcatttt aagtatgtgg taaagcagct tcatctttca aaattgattt gctctggttt 720
ttcttttagtc cattagattc cagaatgtcc ttttactggg aatttagtta tgtattaaga 780
taacctgttt tcagtctttt ttgaaaagaa gacattattt atattgaacc acctattttt 840
aaaattttta acttttatat accacttgtg tgattccagt gtcatgtctt gggtttgatg 900
tcgttggaca gaaaagtgtg tcaattattt taaatgaatt tttcccatg tttgaggctt 960
agtctgtaaa tgtgttgctg taacagaaaa tacttgggta tgcattactt gaatacttga 1020
aaactgaaat taataagatg tattacataa tgaattagat ttctctgaac agtttttaca 1080
ctgaaaatct tcatttctgg attgcagttt gaaatggaat gaagacctga attatttggg 1140
tagaaaaaat tatgatagtg cttataagaa ctgtaaactg ttttaaacta ttttgtgttt 1200
gacgcaccaa acttcaagtt ttttgtaagt ttctctcctg aaattttctt tctcttctat 1260
actttatgca cttactatac tactgatgta ataaaagagc agggttaaaa atattgtatc 1320
tgtattcatt gtgaatcctg tagcttttct agttaacaaa aaatcgcttt ctaaaatact 1380
cttaatccca ttgttttggg taacatctta cccatttggt gtatttcaaa tgccattaat 1440
catttttagta caacacctat gtttataaaa atttgaaaac attacatatt gtatttaaaa 1500
ctaattagtg aagagtaaga aaaaaactag ccaacagaat tgtaggtgat gcattagtta 1560
aatttcaaaa ctcataataa aggaactttc agagattggg tgaaaccagc tggtatccct 1620
gtaaattagc tcctgtgact ggaaaagacc caaaaaggc agtagaggag attagtgttt 1680
acttgctgtg gttgtgggtg gctgctactt aattataggt agtgacacac tgaaattcctt 1740
atgtgtccaa taatctgaag tagtttctta tatttatctg tactaaattg actataaatt 1800
gagtctgcaa agaggaaact ttttgactgt actgtattta ggagcctttg tacagcttgg 1860
tcaaatttcc atgatatgaa gtatttgagt tttaaaatat actgttatta aaaggaaaaa 1920
gacatggcca ttattccatg tgcttaaatg ataatttctt tattcagttt cagaagaaaa 1980
agaatgaaat tgggtaactg tcattgcgtt agytattatg tgaattggga aattgtggca 2040
taaagcttaa attcgtgttt atcaaagtgt aaccatagta gtataatgct gctttgtata 2100
taatgtaagt gctacaaata gtctcagcac tgaaaatgta ttgataacct ttaaataaat 2160
gcaacttttg atgtaggtgt tttgctatgc ctcaaaaaat atctgtctga gaatttgta 2220
atctgtttga taatgaagat acttctctgt ttcttgtttc atattttcat gttcaaaaat 2280
taagtgttac atttttacta ctgttaattt aaataaaatt tgttctgtgg ataaaatgag 2340
gttggcagtg aagaaaatta aaaacagcct cattcatgta actggttaag taaaaataca 2400

```



```

ttttcactat gtgttcataa actttttaatg aagctgtttg tctttcagtt caaatataag 2460
tgatgttttag gcttttatttc tgttaataag gctttttacc attgattaaa tgaaggaatg 2520
tatctttttg aagagattta tattctgtaa ataaaaattc gttgtaacaa taaagttgag 2580
ttctaactac aaaaaaaaaa aagtcgacac cgccgggaat ttaggtgtag tagtcccccg 2640
ggaaattcgg accggttact gaaggcgatc cagttttccc aaagttgggc gtatt 2695

```

<210> 296

<211> 1394

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1238)

<223> n equals a,t,g, or c

<400> 296

```

gcccacgcgt ccgagctcag tcagcagaag agataaaaagc aaacaggtct gggaggcag 60
tctgttgcca ctctctctcc tgtcaatgat ggatctcaga aataccccag ccaaactctct 120
ggacaagttc attgaagact atctcttgcc agacacgtgt ttccgcatgc aaatcaacca 180
tgccattgac atcatctgtg ggttcctgaa ggaaagggtgc ttccgaggta gctcctaccc 240
tgtgtgtgtg tccaagggtg taaagggtgg ctctcaggc aagggcacca ccctcagagg 300
ccgatctgac gctgacctgg ttgtcttcct cagtcctctc accacttttc aggatcagtt 360
aaatcgccgg ggagagttca tccaggaaat taggagacag ctggaagcct gtcaaagaga 420
gagagcattt tccgtgaagt ttgaggtcca ggctccacgc tggggcaacc cccgtgcgct 480
cagcttcgta ctgagttcgc tccagctcgg ggagggggtk gagttcgatg tgctgcctgc 540
ctttgatgcc ctggattttg cccgwacagg tcaattgact ggcggtata aacctaaccc 600
ccaaatctat gtcaagctca tcgaggagtg caccgacctg cagaaagagg gcgagttctc 660
cacctgcttc acagaactac agagagactt cctgaagcag cgccccacca agctcaagag 720
cctcatccgc ctagtcaagc actggtacca aaattgtaag aagaagcttg ggaagctgcc 780
acctcagtat gccctggagc tcctgacggg ctatgcttgg gagcgaggga gcatgaaaac 840
acatttcaac acagcccagg gatttcggac ggtcttggaa ttagtcataa actaccagca 900
actctgcata tactggacaa agtattatga ctttaaaaac cccattattg aaaagtacct 960
gagaaggcag ctcacgaaac ccaggcctgt gatcctggac ccggcggacc ctacaggaaa 1020
cttgggtggt ggagacccaa agggttggag gcagctggca caagargctg aggcctggct 1080
gaattaccca tgctttaaga attgggatgg gtccccagtg agctcctgga ttctgctgg 1140
gagacctcct gcttctctcc tgccattcat ccctgcccct ctccatgaag cttgagacat 1200
atagctggag accattcttt ccaaagaact tacctctntc gcaaaggcca tttatattca 1260
tatagtgaca ggctgtgctc catattttac agtcattttg gtcacaatcg agggtttctg 1320
gaattttcac atccctgtgc cagaattcat tcccctaaga gtaataataa ataatctcta 1380
acaccaaaaa aaaa 1394

```

<210> 297

<211> 998

<212> DNA

<213> Homo sapiens

<400> 297

```

ggcacgaggt gaaataacgg gcccatataa atccctctgc cgcccgctg caagatggat 60
tgggcgcat gaaattcctc cgcragataa ttaaacctcg ggcctcatcc gggcaaaatt 120
acattccttg tgacgactgc gcatgctcgg aaaggggacg caatcragat cccaaacgcg 180

```

```

gtacagacca aaccgcagtc cacgttacgg atcggccttac tccgcggagt tggcctcatt 240
tctgcagtcg gcgctccctg tagtttctcc tctcgaacgc caggtggagc aaccggccgg 300
ataccgccac agccctggca ggcggcgctg tgatgcctga gctgatcctc tctcctgcca 360
cagctcctca cccctgaaa atgttcgcct gctccaagtt tgtctccact ccctccttgg 420
tcaagagcac ctcacagctg ctgagccgtc cgctatctgc agtgggtgctg aaacgaccgg 480
agatactgac agatgagagc ctcagcagct tggcagtcctc atgtccctt acctcacttg 540
tctctagccg cagcttccaa accagcgcca tttcaagga catcgacaca gcagccaagt 600
tcattggagc tggggctgcc acagttgggg tggctggttc tggggctggg attggaactg 660
tgtttgggag cctcatcatt gggtatgcca ggaacccttc tctgaagcaa cagctcttct 720
cctacgccat tctgggcttt gccctctcgg aggccatggg gctcttttgt ctgatggtag 780
cctttctcat cctctttgcc atgtgaagga gccgtctcca cctcccatag ttctcccgcg 840
tctggttggc cccgtgtgtt ccttttcccta tacctcccca ggcagcctgg ggaacgtggt 900
tggctcaggg tttgacagag aaaagacaaa taaatactgt attaataaga aaaaaaaaaa 960
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaa 998

```

<210> 298

<211> 1666

<212> DNA

<213> Homo sapiens

<400> 298

```

atccttcaact aagcctgctt tagtttccac cacctgcttc tgcattcttt taatggctcc 60
ttaggtctcc aggaaagcta acagccaggg agaggatcag tctcttgctg gacctggca 120
gctttkktga gagcgacatg tttgtggaac acagatgtgc agattttgga atggctgctg 180
ataagaataa gtttcctgga gacagcgctg tcaactggac aggccgaatc aatggaagat 240
tggtttatgt cttcagtcag gattttacag tttttggagg cagtctgtca ggagcacatg 300
cccaaaagat ctgcaaaatc atggaccagg ccataacggt gggggctcca gtgattgggc 360
tgaatgactc tgggggagca cggatccaag aaggagtgga gtctttgget ggctatgcag 420
acatctttct gaggaatgtt acggcatccg gagtcacccc tcagatttct ctgatcatgg 480
gcccatgtgc tgggtggggcc gtctactccc cagccctaac agacttcacg ttcatggtaa 540
aggacacctc ctacctgttc atcaactggc ctgatgttgt gaagtctgtc accaatgagg 600
atgttaccca ggaggagctc ggtggtgcca agaccacac caccatgtca ggtgtggccc 660
acagagcttt tgaaaatgat gttgatgcct tgtgtaatct ccgggatttc ttcaactacc 720
tgccctgag cagtcaggac ccggctcccg tccgtgagtg ccacgatccc agtgaccgtc 780
tggttcctga gcttgacaca attgtccctt tggaatcaac caaagcctac aacatgggtg 840
acatcataca ctctgttggt gatgagcgtg aattttttga gatcatgccc aattatgcca 900
agaacatcat tggtggtttt gcaagaatga atgggaggac tgttgaatt gttggcaacc 960
aacctaaggt ggcctcagga tgcttgata ttaattcatc tgtgaaagg gctcgttttg 1020
tcagattctg tgatgcattc aatattccac tcatcacttt tgttgatgtc cctggctttc 1080
tacctggcac agcacaggaa tacgggggca tcatccggca tggtgccaag cttctctacg 1140
catttgctga ggcaactgta cccaaagtca cagtcacac caggaaggcc tatggagggtg 1200
cctatgatgt catgagctct aagcaccttt gtggtgatac caactatgcc tggcccaccg 1260
cagagattgc agtcattgga gcaaagggcg ctgtggagat catcttcaaa gggcatgaga 1320
atgtggaagc tgctcaggca gactacatcg agaagtttgc caaccctttc cctgcagcag 1380
tgcgagggtt tgtggatgac atcatccaac cttcttccac acgtgcccga atctgctgtg 1440
acctggatgt cttggccagc aagaaggtac aacgtccttg gagaaacat gcaaatattc 1500
cattgtaaac aaatcaaagg aaaagaaacc aagaactgaa ttactgtctg cccattcaca 1560
tccattcct gccttttgca atcatgaaac ctgggaatcc aaatagttgg ataacttaga 1620
ataactaagt ttattaaatt ctagaaagat aaaaaaaaaa aaaaaa 1666

```

<210> 299

<211> 2444

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (4)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (402)

<223> n equals a,t,g, or c

<400> 299

```
ctgngtgagc tggagcgcta tgtcacctcc tgtttgcgga agaaaaggaa acctcaagct 60
gagaaaagttg atgtgattgc cggctcctcc aagatgaagg gcttctcgtc ctgagagtcg 120
gagagctcca gtgagtcacg ctctcttgac agcgaagmcw ccgaaacagg tcctgcctaa 180
tcattggaca cggactctta ataaaacggt cttcagttcc agattccttc ccagcaagct 240
atagcttaag tccattttct tccgtgaaag ggacaggact ccatcaagtt atggaattcc 300
tcagagccct gggcctgtcc cccggggtgg attagtcatg tccagcagca cacgcctagt 360
cccgccttcg ggaaggctgc ctgcctggcc agccgccag gncctctgt gttaaagactg 420
cctggctgtc ctgcccagcc ttcttggttc tctgggtgcc tctgggtggg tggcatctcc 480
tggagggtga tgacaatccc caacacatgc attcatgtgg tgctactctg tgtgcaaagc 540
cagaccccaa gtatgttttc tctctttgtc ccatccctct tttctggga ctttggaacc 600
taactacttc cctcctgaac cttgcagtga catcagtcga ggagagctct cgttcagtg 660
gcggaagaac actctgacct ctgagctgt cctagataag gaggaggagc ttttagaggca 720
aggcctctag accctggaag gctcagtgag gctcttccca cagcatgctt ctactggtg 780
ccctgtaagg ctgagccac cgctgactct gaggcttttg gagtctttcc tccttcgtct 840
ccattgttcc cgtgcatttc caaaagctta agttgcctgg tgggcatttc cccagtttct 900
ttggcctccg tcttctcaag tcacataggg aaagtacctc ctggaaccag gctgcagtat 960
gcaggamctg ccaggcagsc actggtgaag ggccttgggc ctatcatccc cccaacccca 1020
cctcacccca cccgcctcct ctagtgggtg gagtctgggc tgggtggacca gaggagggtg 1080
tcacagaccc tcagggactg ccccatggac acctctgact ggtgttaaca gtgtgaacat 1140
tttccccgtc ttcagtcctt tagaatgacg acagcccctg gggttggggc aggcgagtg 1200
ggccacatca tccaagccct cccagagaca caaataggct tttttgctct aaaaataaat 1260
accagccctt ttttggtcac aaatccagca tctcagcaga aaactgcctg acatgaaaag 1320
tcccctgagg aactgcatct gcgtttcagg ggttttctat ttttctcct tttttaagt 1380
gtagattgtg ggtgcttctt agaggcctgc cttcttcttg aactggaagt gggctatcac 1440
catgggcaag cccttgggtg caggctcccc acctgcctgg gaactctggc agctctcctc 1500
agctccttgg gcttgagcag ctgcaactgc cccagatttg ctgtggaagc aggggctagc 1560
cctggcctca ccagggccty ccggggccct gcattgatgc tcaggagttc ctgggctgct 1620
cttgatcctt tctgggcac cagcttccag ttaagctctg tttgccaac aaactattct 1680
cagctgccct ttggcctgcg cctgatgtgt tcctgttgca gtccccgctg cctgagacag 1740
gagcaggcag gagagccttc atgcccagat tcccacagga caattgggga gctgctggca 1800
ttgtctttct gggaagattc tgctttcttg gaccaaattg cagcctgatt accagtgtcg 1860
ggcctgcatg ctgccccga cacacgcacg cacgcgcaca cacgtgtgca catgggccat 1920
agccacaagc cagctctcct ccagggtcct ttcaacctcg ctgtccaggg acctgtcct 1980
tcttgcccggt ggggcttcca tctggcagag aacgttcagg gcttgttgaa cttgaaagct 2040
cattagactt aagctgtcac ctgtgcttgg tgccccagga acagccagag aggacagtgc 2100
ccactcactt cttgttgga gcctcctgtg cagggaagtgc cagccgggcc tcgacgcacc 2160
```

251

```
agctggctgt gggctcctgag gaggggagggg aggcggccgc tcagtgcaga tggggactcc 2220
tctcctctgc cctgacctta ccctccatta cctccttcac tggagtgggg ctgggggggtg 2280
gggtggaatca gtgttttaaat cggattttta aaaaacattt tatttctttg tacaattacc 2340
atcctatgta aagatgaaat ttgtgttgag ttgaagattg tcatggaata aagatcacac 2400
cgtacttgag gccatcttca tgtaaaaaaa aaaaaaaaaa aaaa 2444
```

<210> 300

<211> 1026

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1026)

<223> n equals a,t,g, or c

<400> 300

```
gctcctgcgc gctgacgtca ggtgcgtgcc cctgtccggc agccgaggag accccgcgca 60
gtgctgccaa cgccccggtg gagaagctga ggtcatcatc agatttgaaa tatttaaagt 120
ggatacaaaa ctatttcagc aatgcagaca attaagtgtg ttgttggtgg cgatgggtgct 180
gttggtaaaa catgtctcct gatatacctac acaacaaaca aatttccatc ggaatatgta 240
ccgactgttt ttgacaacta tgcagtcaca gttatgattg gtggagaacc atatactctt 300
ggactttttg atactgcagg gcaagaggat tatgacagat tacgaccgct gagttatcca 360
caaacagatg tatttctagt ctgtttttca gtggtctctc catcttcatt tgaaaacgtg 420
aaagaaaagt ggtgcctga gataactcac cactgtccaa agactccttt cttgcttggt 480
gggactcaaa ttgatctcag agatgacccc tctactattg agaaacttgc caagaacaaa 540
cagaagccta tcaactccaga gactgctgaa aagctggccc gtgacctgaa ggctgtcaag 600
tatgtggagt gttctgcact tacacagaaa ggcctaaaga atgtatttga cgaagcaata 660
ttggctgccc tggagcctcc agaaccgaag aagagccgca ggtgtgtgct gctatgaaca 720
tctctccaga gccctttctg cacagctggt gtcggcatca tactaaaagc aatgtttaa 780
tcaactaaa gattaaaaat taaaattcgt ttttgcaata atgacaaatg ccctgcacct 840
accacatgc actcgtgtga gacaaggccc ataggtatgg cccccccctt cccctccca 900
gtactagtta attttgagta attgtattgt cagaaaagtg attagtacta ttttttttg 960
ttgtttcaaa aaaaaaattt ttgtgtgtgt gttttttttt tttttttttt tttgggggtt 1020
aaaaan 1026
```

<210> 301

<211> 830

<212> DNA

<213> Homo sapiens

<400> 301

```
tggtgatctg gactgtcccc actgggtcct ggcagaaatc agcacgctgg ccaagatgta 60
tgaraagatc ctgaagctca cggctgacgc caagtttgag tcaggcgatg tgaaggccac 120
agtggcagtg ctgagtttca tcctctccag tgcggccaag cacagtgtcg atggcgaaac 180
cttgctccagt gaactgcagc agctgggggt gcccaaagag cacgcggcca gcctgtgccg 240
ctgttatgag gagaagcaaa gccctttgca gaagcacttg cgggtctgca gcctacgcac 300
gaataggttg gcaggtgtgg gctggcgggt ggactacacc ctgagctcca gcctgctgca 360
atccgtggaa gagcccatgg tgacacctgc gctggaggtg gcagctgccc cagggacccc 420
agcccaggct gttgccatgt ccctctcagc agacaagtgc caggtcctcc tggcagaact 480
gaagcaggcc cagaccctga tgagctccct gggctgagga gaagggtgtt ccaggcctgt 540
```

```

gtggagccgc cctgcccgta tggagtcacg ccctctgaac tgctcttcgg gaggcagccc 600
tggttctagg atgctgaggg cctggcccgg actctggcct cccagatccc cagctgcctc 660
acttctctct tgagaacttg gctcagggct cctgaggacc tttcccagca ttaccttccc 720
ttcccttgaa aggcaattgt tggctgtttt cataagcagg aaaaataaac agaagtataa 780
aggaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 830

```

<210> 302

<211> 3300

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1158)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (3232)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (3280)

<223> n equals a,t,g, or c

<400> 302

```

cagccgcgac agtctcaagg gcggcgccgc gctggagaag gagagccatc gccgctcgtc 60
cccgtcaac gccgccagcc taaacggcgc cccaagggg ggcaagtacg acgacgtcac 120
cctgatgggc gcggaggtag ccagcggcgg ctgcatgaag accggactct ggaagagcga 180
aactaccgtc taaggtgggg cgggcgacgc ggtagacggg ctggccacgc ggctcgttcc 240
cccgtcctc ggggccctcc aaggtgtctc cgtagtcagc aggttgagg cagaggagcc 300
gatggctgga ggaagcccac aggcggatgt tccccacttg cctagagggc atccctctgg 360
ggtagcgaca gacaatcca gaaacacgca taatacattt ccgtccagcc cggggcagtc 420
tgactgtcgg tgccctcca ggaacgggga aggcctccgt ctgtgtgaaa gggcacagca 480
catcccaggt gcacctccc caagtactcc caccgcgcct actgtccatg cggcctcact 540
gggggccatc agcctcacca gcaaagcaga gatgagagcg tgggaactgt gttctttcct 600
ccctgccctc tactgatttc agcccagccc ctgcctagat cctaggtccc tttcctccc 660
gagtttggtt ggcacgagag ctagcccagc acatgaagca ggtgatgtta agtcacaagg 720
tgctgctttt cagatccact atgcaagagg ggaggggtgg gccacgtgra aaggcagctc 780
tagacatcaa ccagtccttg gggaggggag tgggaaccgg gcacaactag gaacaatgcc 840
accattccca caggagtggg acttaaacca gacagcaggg ttcagagggt gcacacsagg 900
acaaagctga ggccctgcac ctcaacagct gactgccagg tgcctgtggg tgaactgagg 960
ggagtagagg gagagggcag gtggaactgg ggcagaatct agtcatgcc taaagctagt 1020
cctgtaaaaca atggtgcccc agaaagctgc aggtggtgtt tggagaagca gttacttttc 1080
agttacaaga cccatctccc tagtctcagc cttacaacac cacgggacta aggaagagca 1140
cttccttgcc tccgtaangc cagaggaaga accatcccaa tcatttgatc tccagctcca 1200
cagtagagag aaacctacaa aatgtcaaac cagcttccc actcccagga gctcaagcca 1260
agcccagagg cagtggtcgg ggtccctgca ggtcatgagg ggcctatgcc tttactcctt 1320
ttaaacacca gcaaccgtct ttccccaac ctaaaaccaa ccaccagcat ttcactacag 1380
gaccaaattg aaaccgaggg aaccctgggt cttgggaaga acaacaggaa accaaggctt 1440

```

```

gacctaggggt tccctcccag tcttcacatc actctggcct catcaccaag gtgacagagg 1500
acacagggga gggggaaaac ccacacacac tccttggaat gggtcctgtt atttatgctt 1560
gctgcacaga catattagaa gaaaaaaaaa agctttgtat tattcttcca catatgctgg 1620
ctgctgttta cacaccctgc caatgcctta gcaactggaga gctttttgca atatgctggg 1680
gaaaggggag ggaggggaatg aaagtgccaa agaaaacatg tttttaagaa ctcggtgttt 1740
atacaataga atgttttcta gcagatgcct cttgttttaa tatattaaaa ttttgcaaag 1800
ccctttgagc tactgcctta gtctaccac tgctcctttg ttatgaggta gaggatctca 1860
tgacaccata cacacaaacc catcattgcc tgtgaatgca cgtagggcca gaattcccca 1920
gttcccgtc ctctgagggt tgatactgct gggaaatgcc accactccac aagcagaggg 1980
aagccccctc aggcctgcag gaggagccgc agcagtgtgt ccaattcaaa ccagcagcaa 2040
agagcctgac attttcccat ccatctatga ggaaagccat ctacagaaac atggacatag 2100
gcaacttgct ctcccacacc aagggatggg aatctctcct acctatagtc atccctgcac 2160
tcctgacttt actccaggac ccagggtcca actaatggca gagccccctc tggttccttc 2220
aaacaagaaa agcaatacct acggactggg gtacacttcc atccttggtt ataacaggaa 2280
tgttatcaag ctgtcagaac aggatgaagt gctcccagt gatatccatc agggaggggt 2340
agggacactc gtggcagcct gtctagcagc ctgggctctc tgaaagtccc taacttctctg 2400
aggggtacgc aaatactgtt ctatttcact atcagaaatg ttctcatctc cagtgcagct 2460
ggagacaggg ggtacagggc agatccgctt cggggacttc aacatgcagg gtggcaagar 2520
aagggcagga ctggccggcc gcttcccctg gggtaaacct aaggaattrk ttcmcacctc 2580
cccttctcct tgccccctgc cccactccgg tggctccttc tctcgggtct ccacttctgc 2640
tgtcccatcc cgaaaggcag agcggaccag tgactggcgg tgctggagaa ggtcaccgat 2700
gtgcttcacc acagaccgtt tgtcaagtct cagaactcgt aaccaggcca gctgctcagc 2760
catccgcagc agcacagcca gcagctcctg caggcgggag gacgccgggt agggcaggtc 2820
cacatttgcc aatttataaa atcgggcaag ggaacatgaa agccgatctg caggctgcag 2880
cgactgccaa gccaggaaag tcgcagcagt gatgacgggc aagggatgcc tcccggtcac 2940
cagccacgtc tcatttgcca gctccaccaa ctgcattgtt cgagacagca tcttctcttt 3000
gtcttccacg tatttggtctg gcacagaagg tgaagcttgg aacagtttga agctgaaata 3060
acaaaaatga gggttggatc ttaatgatat aggggctgct ctcccacagt gaggaaagac 3120
agcccactca agatggggaa gctattctgc cctcaggaat actcaagctc actgggcagc 3180
aagttaataa aggtagttag agaaaacagg gcgtcttccg cttgttaggg gnagggtgaa 3240
ggatggagga gaaccacgaa catttattgg gccgctcccn atccacatta ttctgagtgc 3300

```

<210> 303

<211> 475

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (444)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (451)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (454)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (470)

<223> n equals a,t,g, or c

<400> 303

```
caaagaattc ggcacgaggt ctgatcttcc tgcggctgaa ccgcccggct gagccgacat 60
tgccggcgctc ttggcgattc ggcccgcacga gctccgcttt cgctacagca tgggtggccta 120
ctggagacag gctggactca gctacatccg atactcccag atctgtgcaa aagcagtgag 180
agatgcactg aagacagaat tcaaagcaaa tgctgagaag acttctggca gcaacgtaaa 240
aattgtgaaa gttaaagaagg aataatctac cctgactaaa gcttgaaatg ctacatttcc 300
aaggtgaaga tgtgtgggca catgttatgg cagattgaaa aggatctcat tccatgggaa 360
aaaaaaaaat cctgtcttgt tcataaattg acaatgtcaa taaattgaaa tatggttcac 420
tgttaaaaaa aaaaaaaaaa aaangggggg nccnttttaa agaatccaan ttac 475
```

<210> 304

<211> 2902

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (2888)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2891)

<223> n equals a,t,g, or c

<400> 304

```
ttacatgcta atcaagtgat ccacagagac atcaaaagtg acaatgtact tttgggaatg 60
gaaggatctg ttaagctcac tgactttggt ttctgtgccc agatcacccc tgagcagagc 120
aaacgcagta ccatggctcg aacgccatac tggatggcac cagagktggt tacacggaaa 180
gcttatggcc ctaaagtcca catatgggtct ctgggtatca tggctattga gatggtagaa 240
ggagagcctc catacctcaa tgaaaatccc ttgagggcct tgtacctaat agcaactaat 300
ggaaccccag aacttcagaa tccagagaaa ctttcccaa tatttcggga tttcttaaat 360
cgatgtttgg aaatggatgt ggaaaaaagg gggtcagcca aagaattatt acagcatcct 420
ttcctgaaac tggccaaacc gttatctagc ttgacaccac tgatcatggc agctaaagaa 480
gcaatgaaga gtaaccgtta acatcactgc tgtggcctca tactcttttt tccattttct 540
acaagaagcc ttttagtata tgaaaattat tactcttttt ggggtttaa gaaatggtct 600
gcataacctg aatgaaagaa gcaaatgact attctctgaa gacaaccaag agaaaattgc 660
aaaaagacaa gtatgacttt tatatgaacc ctttcttttag ggtccagaag gaattgtgga 720
ctgaatcact agccttaggt ctttcagcaa acagcctatc agggccattt atcatgtgtg 780
agatttgcat tttactttgc tgactttggt gtaatatagc ccattcattg tcccctttgg 840
ggtatttcca atacttgaat ggcagattgg agtttttcag agtatgtgtt tcatctgcta 900
gtctttctct ccttcatagc ttttcttttc ctggacttgc tccttttgag ttgcttttgc 960
gtttctcatg cctaggcaag tgtaatagaa attatgtagc tccttatgtt ggcaaaggag 1020
ctctatatag tttcactttg tataaaagtt aggaccagct gttgttacat gtaatatattt 1080
agttcagaac ttgacctgaa ggaagggaag aaaagtatgt gatttttacc ttttttaaca 1140
```

```

aatgtgaaaa agtcagtttt agaaatttcg tggtagtaag ttcggcattt gttacatgta 1200
tagagagaag actaataatc tctatttata actaaatcat tgagatagaa aaagattccc 1260
attgactgta gacttcttcc cattttgtct tcccttctgc ctgtttcccc ttcaggcttg 1320
gctctaggaa ccaaagtgat ttgttggtgt tccaacctgg gctttgtgac tttggttagt 1380
gccactacct tcttccctcc tttccccctt caatttgtaa ataaatttct gtatatgttg 1440
caatttttagg tttaggtttg ttctttttct ttttcattaa tcctctctca cctcacagat 1500
acccctcccc atggcaaata atataataac cagtgaattt tcaggaattt aaaaattagc 1560
ttttttccac ttaaaggaga aaaatatattg ggactagcag cagaggcagt aagagatgtg 1620
aaccttggtg agctctgata cagtgagaag agattatact catgaaagag aatgttagtg 1680
ttacagagaa gcagccgata gcaaatcrac tgtagagact tggcggcggg gccattgccc 1740
caggctcgta gcagtgtggt attatctatg agaacttgag cgacagagta tttcttgatg 1800
aatttataga tcatttgaga tgttgagtta ctttagttta gttttgtttt gttttttcaa 1860
ataagtagag actattgtaa aaaacgagaa aggaaaatga aatgtgcgtg ttgatagcaa 1920
taatttgttt cttttaaaga ttctaaaagg tctgagacct gtagcattaa ttatttgagt 1980
gccctccctt ctccctcccc ctcccttttc tcttctcttt tttcctctcc tctycttctc 2040
ctttattcat tgttttgctt ttggagtrgg tgttgttcaa gtatctgtgg tttggttctg 2100
gcattttggt cccaccatcc ccttccccca ttaacttccc ccctgcttgc catcctgcag 2160
tagtataaat catgaataaa aaataatttt gctgttgtag tatacattgg agaaactggc 2220
aggttttatt tccattattt tatttccact atatctatga taagatgcaa ttataaggag 2280
agaagtgact gttttttatt gataaggcaa gattttcaga aaaatgagta aaataattaa 2340
tgaaacatat tttaggcact taatggtctc tgttttcaat ataattcttg atttcatttt 2400
tctctggaat atattggcct tctacagcta ttactgaatt atagaaactg gtttatttct 2460
ggcagaaagc tgcagtgcc cctgagttcc aaattttacc attctttgta aacagttgga 2520
tggtattatg taaagaagat gctaccaatg aaatagaaaa ccaacgagat gagaagactg 2580
tgatcctcat gtactcagag gcaacttccct cctaagtcaa agaccatcct cactgactat 2640
gtgccaacgc ctggtttcag gcttgtgact caacaaaggg cttttccatt gatagaagca 2700
gtttgggatt tgtagttgcg acttcttcga tagttacctg cacgtccatt gctggcaact 2760
gacttgatcat taaaacctgg ctctttggtt aaggagagcta cgctgtggtt tattcttaag 2820
ttacgtggat aaactaacct ctaacagaaa tatactttgg ttaattttga aaaaaaaaaa 2880
aaaaaacncg nggggggggc cg 2902

```

<210> 305

<211> 1553

<212> DNA

<213> Homo sapiens

<400> 305

```

ggcgacgcgg tatttgaatc ctggaacaar gctacagcgt cgaagatccc cagcgctgcg 60
ggctcggaga gcagtcctaa cggcgcctcg tacgctagtg tcctcccttt tcagtcgcg 120
tccctccctg ggccgggctg gcaactcttg cttccccgtc cctcatggcg ctgctccgac 180
gcccagcggg gtccagtgat ttggagaata ttgacacagg agttaattct aaagttaaga 240
gtcatgtgac tatttaggcga actgttttag aagaaattgg aaatagagtt acaaccagag 300
cagcacaagt agctaagaaa gctcagaaca ccaaagttcc agttcaaccc accaaaaaca 360
caaatgtcaa caaacaactg aaacctactg ctctctgtcaa accagtacag atggaaaagt 420
tggtccaaa gggctcttct cccacacctg aggatgtctc catgaaggaa gagaatctct 480
gccaagcttt ttctgatgcc ttgctctgca aaatcgagga cattgataac gaagattggg 540
agaaccctca gctctgcagt gactacgtta aggatattca tcagtatctc aggcagctgg 600
aggttttgca gtccataaac ccacatttct tagatggaag agatataaat ggacgcagtc 660
gtgccatcct agtggattgg ctggtacaag tccactccaa gtttargctt ctgcaggaga 720
ctctgtacat gtgcgttggc attatggatc gatttttaca gggttcagcca gtttcccgga 780
agaagcttca attagttggg attactgctc tgctcttgcc ttccaagtat gaggagatgt 840

```



```

tttctccaaa tattgaagac tttgtttaca tcacagacaa tgcttatacc agttcccaaa 900
tccgagaaat ggaaactcta attttgaaag aattgaaatt tgagttgggt cgacccttgc 960
cactacactt cttaaggcga gcatcaaaaag ccggggaggt tgatgttgaa cagcacactt 1020
tagccaagta tttgatggag ctgactctca tcgactatga tatggtgcat tatcatcctt 1080
ctaaggtagc agcagctgct tcctgcttgt ctcagaaggt tctaggacaa ggaaaatgga 1140
acttaaagca gcagtattac acaggataca cagagaatga agtattggaa gtcatgcagc 1200
acatggccaa gaatgtgggt aaagtaaattg aaaacttaac taaattcatc gccatcaaga 1260
ataagtatgc aagcagcaaa ctccctgaaga tcagcatgat ccctcagctg aactcaaaaag 1320
ccgtcaaaga ccttgccctcc ccactgatag gaaggctcta ggctgccgtg gcccctgggg 1380
atgtgtgctt cattgtgccc tttttcttat tgggttagaa ctcttgattt tgtacatagt 1440
cctctggtct atctcatgaa acctcttctc agaccagttt tctaaacata tattgaggaa 1500
aaataaagcg attggttttt cttaaggtaa aaaaaaaaaa aaaaaaactc gag 1553

```

<210> 306

<211> 1987

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (731)

<223> n equals a,t,g, or c

<400> 306

```

cagtcaaagt cagtctggct tcttggacat cttcatctat ctactctatc ctcaagtcaa 60
agtagagcct ctgttccctac tgactatagc tacttgccctg aaagcagttt tattggagca 120
gctattggct tcttcattac aggaggaaaa aaaggtcctg aatctgtgcc tccttccctt 180
cttaaagtag tgatgaaacc catagcaact gttggagaaa gctaccaata tcctcctgtg 240
aactgggctg cacttctctc tccacttatg aggctaaatt ttggtgaaga gatccagcaa 300
ctgtgccttg aaattatggg gaccaggca cagtcatccc agaatgcagc tgcactattg 360
ggcttgtggg tgacaccacc actgatccac agtctgagtc tgaataccaa gagatatctc 420
ctgatatctg cacctctgtg gataaaacac atctctgatg aacagatcct gggttttgtt 480
gaaaatttaa tgggtggcagt ttttaaagca gcttccccac ttggaagtcc tgagctatgc 540
ccaagtgtt tacacggtct gagccaggcc atgaaactgc ccagccctgc ccaccacctc 600
tggagtctgc tctctgaagc tactgggaaa atttttgacc tcctgccaaa taagattcgg 660
agaaaggatc tagagctgta tatcagcata gcaaaatgcc tcttagaaat gacagatgat 720
gatgccaatc nggatcgccc aggttactaa gagcaacata gaaaaagctg cctttgtcaa 780
actgtactta gtctctcaag gacgattccc cttggtgaac ctgaaccgat atgctgagcg 840
ttgctgtgca gcaccgtgag aaagaggtgt tggcctggat gattctgcac agcttatacc 900
aggcacggat tgtgagccat gccaatacgg gcgttttgaa gagaatggag tggctcttgg 960
aactgatggg ttatattaga aatgttgctt accagtcaac atcctttcac aatacggtc 1020
ttgacgaggc tttggacttc ttcttgctga tatttgcaac cgcagtgggt gcattgggtg 1080
accacactgc ccctctctc ctcggcctca gtgccagttg gttgccatgg catcaggaga 1140
atggcccggc tgggcccagta ccaagcttcc ttggcaggag tccaatgcac agggctcact 1200
tgacaggagt tctcactctc cttcccaata gcatggctct gctgctgcag aaagagccat 1260
ggaaggaaac gaccagagtc ttcatgtact ggtaattcag catcatggaa agccctaaag 1320
aagccctctc agcacagtc agggatcttt tgaaagccac cctgctgtcc ttgagagttc 1380
tccagagtt taagaagaaa gctgtatgga ccagagcata tggttggtga acagttttgc 1440
agtaaccagc agcattctca gctggatgag gaaaaccata taagtggaaag aagtttttca 1500
gaattcatgc ctgggtattgc tgagacatga tgcagagagt taagggtcat gaaaagatgg 1560
ccacatcact gacagcttga cacatgcctc ctaagagagg agtgcattgc tttagtacc 1620

```

```

gggccagttg agactgaaac aggaacttgg attttcttta tttggcttga gttcaatgtg 1680
gagattttct ttgtgaaagc ttgaagatat tatcttctcc ctgctaaatt ccagtaaaat 1740
aatgttgtca attttgtgcg tgtgactttt gttttaaggc atgggggaag gtgccagaac 1800
cacttggtga caatggcatt atgatctatt ttccatgaat ctccatgagg atattcattg 1860
actcagttag ttagacaaat ttctttattg ataaaacact ctcttggaac tgctatacac 1920
atttaaataa taagcataac attgaatatt agctaaatca gattcattaa tgggtgtctat 1980
catttcc 1987

```

<210> 307

<211> 785

<212> DNA

<213> Homo sapiens

<400> 307

```

gcgcgacccg ccccgctccc tccagtctgg cctgggcgcc gcgggaacgc tgtcctggct 60
gccgccaccc gaacagcctg tcctgggtgcc ccggctccct gccccgcgcc cagtcatgac 120
cctgcgcccc tcactcctcc cgtccatct gctgctgctg ctgctgctca gtgcggcggg 180
gtgcgggggt gaggtgggc tcgaaaccga aagtcccgtc cggaccctcc aagtggagac 240
cctgggtggag ccccagaac catgtgccga gcccgctgct tttggagaca cgcttcacat 300
acactacacg ggaagcttgg tagatggacg tattattgac acctccctga ccagagaccc 360
tctggttata gaacttggcc aaaagcaggt gattccaggt ctggagcaga gtcttctcga 420
catgtgtgtg ggagagaagc gaagggaat cattccttct cacttggcct atggaaaacg 480
gggatttcca ccattctgtc cagcggatgc agtgggtgcag tatgacgtgg agctgattgc 540
actaatccga gccaaactact ggctaaagct ggtgaagggc attttgcctc tggtagggat 600
ggccatgggt ccagccctcc tgggcctcat tgggtatcac ctatacagaa aggccaatag 660
acccaaagtc tccaaaaaga agctcaagga agagaaacga aacaagagca aaaagaaata 720
ataaataata aatttttaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 780
aaaaa 785

```

<210> 308

<211> 2178

<212> DNA

<213> Homo sapiens

<400> 308

```

ggcagaggrc gggaaagacc agtggctctt tggcatggat gagggccgga aacagctggc 60
ggccagtgtc ggcttcagga ggttgattac agtggccctt caccgaggtc agcagtatga 120
aagcatggac cacatccaag ctgagctgtc rgctagagtc atggagctgg ccccagctgg 180
gatgccacc cagcagcagg tcccccttct gtctgtgggt ggggacattg ggtccggac 240
cgttcagcac caagactgca gccccttgag cggtgactat gtcattgagg atgtgcaagg 300
ggatgacaag cgatacttcc gtcgactgat ctctctcagc aacaggaatg tgggtgcagtc 360
cgaagccagg ttgctgaagg atgtgtctca caaagcccag aagaagcggg aaaaggacag 420
gaagaagcag cggcctgctg atgcggagga cctccctgca gccccggggc agtccattga 480
taagagttac ctgtgttgtg aacaccacaa agccatgac gctggccttg ccctgtgtag 540
aaaccagag ctactcctag agatcccact ggcattgttg gtggtaggcc tgggcggggg 600
cagcctcccc ctctttgtcc acgatcattt tccaaagtcc tgcattgatg ctgtggagat 660
cgatccctcc atgttggaag tggccaccca gtggtttggc ttctcccaga gtgaccgaat 720
gaaggtccac attgcagatg gcctggacta tatgccagc ttggcaggag gaggagaagc 780
acggccttgc tacgatgtca taatgtttga tgttgacagt aaggacccaa cactgggaat 840
gagttgtccg cccccgcat ttgtggagca atcttttcta cagaaggtta aaagcatctt 900
gactcctgaa ggtgttttta ttctcaacct tgtgtgccga gacttggggc taaaagactc 960

```

```
agtgctggct gggctcaagg cagtgttccc cctcctatat gtccggcgaa ttgaggggtga 1020
agtgaatgag atcctgttct gtcagctgca ccctgagcaa aaacttgcca caccagagct 1080
cctagaaaca gccacaggctt tggagcggac cctgaggaag cctgggaggg gttgggatga 1140
cacgtatgtc ttgtcagata tgctcaagac ggtgaaaatt gtgtgactgc ttaggccaaag 1200
cagccctcct gcctagactg accttggaact cccagcctgc cagagaatga agaaatacaa 1260
cgcacagtac ttttgaagct tcgtattttt cttggtttca cactcagcta catgtgacct 1320
ccagcttggg gaggttgccct gaagattagg gaaaataaaa atgtccttcc catcttgtcc 1380
tcttcagtac cacttggggtt ggtttgtctt tgcttcctac accacgtcct tgagtggagt 1440
tccctgctga agcccctagc acacactgca tgccttaaca agtgtgtgca agcccctcag 1500
aactcaagac atccaaattt tattgcgctt ctacttatac tggtttgctt ttgatttatt 1560
cctctattag ttctatagga gtgatctcaa gtgagatagc agagcaagat gccaaaagac 1620
cataaataga gtaaggtttc tatagatgtg agacagattt gagagagcat ttactctgtc 1680
tccctgtgga tgaaactgct gctgaaatgg ttccaatttt taggaatctg cttaccact 1740
tcattatttg acagctttcc ttggtgacct aaaccttgta gcctaagcca tttgtctttt 1800
tctcagtgga gggagtgtat ggacctggcc ccatggcttt gcatgttaga gacctggcag 1860
actaaagtct ctagtgtttg tttgtctaca tttgctgagt gacagctatg tgccagactg 1920
cataaagggt ggtggcagaa gtgaaaatgt ttaagaatga ccaaaaacat tagtaatgaa 1980
agttaatgtg ttccaggcat tcttctaagt ggtttacatg cactgtctca ttaaatctga 2040
gataaaggat acttaagccc aaactatata taaacccaaa tctcacttgg ctggaaacat 2100
caatcttaac catttattca gaaccattaa accaatgatt ccaaaaaaaaaa aaaaaaaaaa 2160
aaaaaaaaaa aactcgtg                                     2178
```

<210> 309

<211> 875

<212> DNA

<213> Homo sapiens

<400> 309

```
caagctcctg tggccacctg tgtcccagca gcagtgagtg gagctgctca gggtgccctc 60
tcctgcgga cagtctctga atgttcaaag atgagggcct ggcttccgtg ctctggcttt 120
gtaacttata tggaaggga agcacatgcc ttcacgggca gggatgttcc cttttcttct 180
cggggtgttg acttgcatc ctgtgtgaac tgttcctct gccatgttta ccgtgtgatg 240
ttctgtagtt gaaaatgtta gttgtctgct ggcacagaat ttatctcgtt cctttctctc 300
ccttctctcc tccaaatcag tctcttccct tctccactag ataactgtaa aaccttttcc 360
tggggtacat acattcggtt aytcttgggc agtggtgagc acgagatgac tttctgcagc 420
gtttatcact gttgggtgga gtcacgtccc ttccctccac cgaagtcac aaccagatag 480
ggaagggaat gatgaggccc agaaaacgag ttcaaactct aggtcttgta cacgtatgta 540
agtaaatgtc aataacccaa gcctttgtca tagcagtcac ttggttgact taggatctgg 600
gtctgttgaa ttttgtgctt gggaatggag ctggagggag tggggcctgt gtacagcagc 660
tacctctccc aggtcctctc acttgccctgc cccgcgtcct ggttgcatgg ccgcacctgt 720
gtgtgtgcag aggtctgtgt cccatcctct gcacctcctt tccgggggcc tggggagccc 780
cacgtgttgc caagatcttg gtgcaataaa atactccggt tttgtgaaaa aaaaaaaaaa 840
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa                                     875
```

<210> 310

<211> 756

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (613)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (638)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (684)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (756)
 <223> n equals a,t,g, or c

<400> 310
 atttaggtga cackatagaa ggtcgectgc aggtaccggt ccggaattcc cgggtcgacc 60
 cacgcgtccg ggcccgtggc gccgacagga tgggcaagtg tcgtggactt cgtactgcta 120
 ggaagctccg tagtcaccga cgagaccaga agtggcatga taaacagtat aagaaagctc 180
 atttgggcac agccctaaag gccaaacctt ttggaggtgc ttctcatgca aaaggaatcg 240
 tgctggaaaa agtaggagtt gaagccaaac agccaaattc tgccattagg aagtgtgtaa 300
 ggggtccagct gatcaagaat ggcaagaaaa tcacagcctt tgtacccaat gacggttgct 360
 tgaactttat tgaggaaaaat gatgaagttc tgggttgctgg atttggtcgc aaaggtcatg 420
 ctggttggtga tattcctgga gtccgcttta aggttggtcaa agtagccaat gtttctcttt 480
 tggccctata caaaggcaag aaggaaagac caagatcata aatattaatg gtgaaaacac 540
 tgtagtaata aattttcata tgccaaaaaa aaaaaaaaaa aaaaaaaagg gsgggcscyc 600
 taaaagatcc tcnaagggcc aagcttacgc tgcatgcnac tctactctct cctatatgaa 660
 tctattataa ctagcctggc ctcnttacac tctgatggaa ttctactgga ttttaagact 720
 atcttggttat atgacactct caaataacca gtattn 756

<210> 311
 <211> 851
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc feature
 <222> (834)
 <223> n equals a,t,g, or c

<400> 311
 ctattggtgt gaacagtgtg atgtacaatt ctcctcaagc agtgaactct acctacattt 60
 ccaggagcac agctgtgatg aacagtactt gtgtcagttc tgtgaacatg aaactaatga 120
 tccagaagac ttgcatagcc atgtggtaaa tgagcatgca tgtaaattaa tagagttaag 180
 tgataagtat aacaatggtg aacatggaca gtatagcctc ttaagcaaaa ttacctttga 240
 caaatgtaaa aacttccttg tatgtcaagt atgtggtttt cggagtagac ttcacacaaa 300
 tgttaacagg catgttgcta ttgaacatac aaaaattttt cctcatgttt gtgatgactg 360
 tgggaaaggc ttttcaagta tgctagaata ttgcaagcat ttaaattcac atttatctga 420

```
agggatttat ttatgtcaat atttgtgaata ttcaacagga caaattgaag atctttaaatt 480
tcatctagat ttcaagcatt cagctgactt gcctcataaa tgtagtgact gcttgatgag 540
gtttggaaat gaaagggaat taataagtca ccttcagtc catgagacaa cttgattatt 600
ctctttaact tacagaatgt tagtttaaaa taataaattc atcctttttt tggagatgat 660
taaattggatg attgtaaaca caacttatga aatctgcctt taacaagtaa ctttttttaa 720
ttataaaatt ttattggcat tgctccattt tctgtatata aatatactt taatgtggta 780
ttttcaaaaa aaaaaaaaaa aaaaaaatcc acgcggccgc gaattcccgg gtcnaacaag 840
ctcactaatc c 851
```

<210> 312

<211> 1335

<212> DNA

<213> Homo sapiens

<400> 312

```
cagaaccgca ccagcagcca accttgccag caggattcct gcagcctctg cggcagccat 60
gaacctagcc agcaaaggag cggcggagtt cctcctcgtc gtcgtcgtcc tctagctcct 120
cctcctcttc atcatcgteg tgcgtcgtcc cctcctcctc tggctccagt tctagtact 180
cagagggtc tagccttcct gtgcaacctg aggtggcact gaagagggtc cccagcccca 240
ccccagcccc aaaggaggct gttcgagagg gacgtcctcc ggagccaacc ccagccaaac 300
ggaagaggcg ctctagcagt tccagttcca gctcctcctc ttcattctcc tctcctcct 360
cctcctcctc ttcttctctc tctcttctct cttcttcttc ttctcctca tcttctcct 420
cctcgtcgtc ttcttctctc tctcctgcta agcctggccc tcaggcttgc ccaaacctgc 480
aagccccaag aagccacccc ctggcgagcg gaggtcccgc agccccgga agccaataga 540
ctcctcagg gactctcgtt ccctcagcta ctgcctgtg gagcgtcgc gtcctcgc 600
ccagccctca ccacgggacc agcagagcag cagcagttag cggggttccc ggagaggcca 660
gcggtggggac agccgctccc ccagccacaa gcgcaggagg gagacaccta gccctcggcc 720
catgagacac cgctcctcca ggtctccata aattgtcttt gggggattcc accacacca 780
atgctctgga gccacaagga gtgtcccttc ttcccagca gagccgtggg agggtccttg 840
tctgctctcc tttgaacctt ggcagccctt ggatggaggg ctccctttcc ctccctttt 900
ttttttcttt gttcctgtga aatgttaatc tccgtgagtt ctctctggtt catgtgttct 960
gggggggttt gggtgggagg gaatgcagat gggagtggg ggaggggagg atacagttca 1020
ggatacccca gcctggagtc agggccaggg aggcattggc ccacttgat ccagaagttc 1080
ccaggggtga ttgtgatggt ggttgggact ggaggttcta taaggtgttc ttggaaggaa 1140
ggggcaggag ttggaattag ttggtcccta ctgtcccca tgaggttgtg aaccctccc 1200
cccaactttt catgtttctt aaaggcattt tggtttttta aaatctgtac agcaagagca 1260
actttttctg tcaataaaaa atgagaaatg caggaaaaaa aaaaaaaaaa aaaaaaaaaa 1320
aaaaaaaaaa aaaaa 1335
```

<210> 313

<211> 516

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (505)

<223> n equals a,t,g, or c

<400> 313

```
tcgaccacg cgtccgaaca tggcggcggg agtgtccgcg gtggtggcgg tgcaagagag 60
```

```

ctgagggagg cgcgagggcg cggagttcca ggtcgagcag ttaggccgcg agcgactgcg 120
gcgccgagcc gatgagtaac ccgaagcccc tagaggagtg gtcacctgcc tgagggcact 180
tctgtcccac cagcatcaga ccaggccgca ccgagtcccc ggcaccatgt ttgggaagag 240
gaagaagcgg gtggagatct ccgcgccgtc caacttcgag caccgcgtgc acacgggctt 300
cgaccagcac gagcagaagt tcacggggct gccccgccag tggcagagcc tgatcgasga 360
gtcggctcgc cggcccaagc ccctcgtcga ccccgctgc atcacctcca tccagcccg 420
ggcccccaag accatcgtgc ggggcagcaa argtgccaaa gatggggccc tcacgctgct 480
gctggacgag tttgagaaca tgttngtgac acgctt 516

```

<210> 314

<211> 1833

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (625)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1761)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1766)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1792)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1806)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1827)

<223> n equals a,t,g, or c

<400> 314

```

tcgaccacg cgtccgcagc cgtcgcccga cgaggcgca cgcctgcagg cgctgctgga 60
cggccgcggg ctctgctga acgctagtgc cgtcagccgc ctgcgcgcct acctgctgcc 120
agcgcgcgca gctccaggaa atgctagtga gtcggaggaa gaccgcagcg ccggcagtgt 180
ggagagcccg tccgtctcca gcacgcaccg ggtgtctgat cccaagttcc accccctcca 240
ttcaaagata atcatcatca agaaagggca tgctaaagac agccagcgct acaaagttga 300
ctacgagtct cagagcacag ataccagaa cttctcctcc gagtccaagc gggagacaga 360

```

```

atatgggtccc tgcgtagag aaatggaaga cactgaat cacctgaagt tcctcaatgt 420
gctgagttccc aggggtgtac acattcccaa ctgtgacaag aagggtatttt ataagaaaaa 480
gcagtgtcgc ccttccaaag gcaggaagcg gggcttctgc tgggtgtgtgg ataagtatgg 540
gcagcctctc ccaggctaca ccaccaaggg gaaggaggac gtgactgct acagcatgca 600
gagcaagtag acgcctgccg caagnttaat gtggagctca aatatgcctt attttgaca 660
aaagactgcc aaggacatga ccagcagctg gctacagcct cgatttatat ttctgtttgt 720
ggtgaactga ttttttttaa accaaagttt agaaagaggt ttttgaaatg cctatggttt 780
ctttgaatgg taaacttgag catcttttca ctttccagta gtcagcaaag agcagtttga 840
attttcttgt cgcttctctat caaaatattc agagactcga gcacagcacc cagacttcat 900
gcgcccgtgg aatgctcacc acatgttggg cgaagcgcc gaccactgac tttgtgactt 960
aggcggtgt gttgcctatg tagagaacac gtttcccc cactccccgt acagtgcgca 1020
caggctttat cgagaatagg aaaaccttta aaccccggtc atccggacat cccaacgcat 1080
gtcctggag ctacagcct tctgtggtgt catttctgaa acaaggcggt ggatccctca 1140
accaagaaga atgtttatgt cttcaagtga cctgtactgc ttggggacta ttggagaaaa 1200
taaggtggag tctacttgt ttaaaaaata tgtatctaag aatgttctag ggcactctgg 1260
gaacctataa aggcaggtat ttcgggacct cctctcagg aatcttctg aagacatggc 1320
ccagtcaag gcccaggtat gcttttctg cggcccggtg ggttaggagg gacagagaga 1380
cagggagagt cagcctccac attcagaggc atcacaagta atggcacaat tcttcggatg 1440
actgcagaaa atagtgtttt gtagttcaac aactcaagac gaagcttatt tctgaggata 1500
agctctttta aggcaagct ttattttcat ctctcatctt ttgtcctcct tagcacaatg 1560
taaaaaagaa tagtaatatc agaacaggaa ggaggaatgg cttgctgggg agcccatcca 1620
ggacactggg agcacataga gattcaccca tgtttgttga acttagagtc attctcatgc 1680
ttttctttat aattcacaca tatatgcaga gaagatatgt tcttgtaaac attgtataca 1740
acatagcccc aaatatagta ngrtctata ctagrtwaty cctgggtgga angtttgga 1800
ggtgcntttt tggataccac tttgggncct gga 1833

```

<210> 315

<211> 1354

<212> DNA

<213> Homo sapiens

<400> 315

```

ggtgagagcg cgcgcttgcg gacgcgsgg cattaaacgg ttgcaggcgt agcagagtgg 60
tcgttgtctt tctaggtctc agccggtcgt cgcgacgttc gcccgtctgc tctgaggctc 120
ctgaagccga aaccagctag actttcctcc ttcccgcctg cctgtagcgg cgttgttgcc 180
actccgccac catgttcgag ggcgcgctgg tccagggtc catcctcaag aagggtgttg 240
aggcactcaa ggacctcatc aacgaggeet gctgggatat tagctccagc ggtgtaaac 300
tgcagagcat ggactcgtcc cactctctt tgggtcagct caccctgcgg tctgagggt 360
tcgacacctc ccgctgcgac cgcaacctgg ccatggcggt gaacctcacc agtatgtcca 420
aaatactaaa atgcgcgggc aatgaagata tcattacact aagggccgaa gataacgcgg 480
ataccttggc gctagtattt gaagcaccaa accaggagaa agtttcagac tatgaaatga 540
agttgatgga tttagatgtt gaacaacttg gaattccaga acaggagtac agctgtgtag 600
taaagatgcc ttctggtgaa tttgcacgta tatgccgaga tctcagccat attggagatg 660
ctgttgtaat ttctgttgca aaagacggag tgaaattttc tgcaagtgga gaacttgga 720
atggaaacat taaattgtca cagacaagta atgtcgataa agaggaggaa gctgttacca 780
tagagatgaa tgaaccagtt caactaactt ttgactgag gtacctgaac ttctttacaa 840
aagccactcc actctcttca acggtgacac tcagtatgtc tgcagatgta cccctgtgtg 900
tagagtataa aattgcggat atgggacact taaaatacta cttggctccc aagatcgagg 960
atgaagaagg atcttaggca ttcttaaaat taaagaaaat aaaactaagc tctttgaga 1020
ctgtctctaa gatgccagca tatactgaag tctttctgt caccaaaatt gtacctctaa 1080
gtacatatgt agatattgtt ttctgtaaat aacctatttt tttctctatt ctctgcaatt 1140

```

tggttaaaga	ataaagtcca	aagtcagatc	tggtctagtt	aacctagaag	tattttttgtc	1200
tcttagaaat	acttgtgatt	tttataatac	aaaaggggtct	tgactctaaa	tgacgttttta	1260
agaattgttt	ttgaatttaa	ataaagttac	ttgaatttca	aaaaaaaaaa	aaaaaaaaaa	1320
aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaaa			1354

<210> 316

<211> 2421

<212> DNA

<213> Homo sapiens

<400> 316

ggcacgagct	cttctgggcg	tgggagaagg	ttctgtctat	cagtgcctgcg	agaaaggaaa	60
gaaacaagtt	tgctctcagc	ggatctttta	atggatgaga	tggtaccac	tcagatttcc	120
aaagatgagc	ttgatgaact	caaagaggcc	tttgcaaaag	ttgatctcaa	cagcaacgga	180
ttcatttgtg	actatgaact	tcagtgcctc	ttcaagggaag	ctaataatgcc	attaccagga	240
tataaagtga	gagaaattat	tcagaaactc	atgctggatg	gtgacaggaa	taaagatggg	300
aaaataagtt	ttgacgaatt	tgttttatatt	tttcaaggag	taaaaagtag	tgatattgcc	360
aagaccttcc	gcaaaagcaat	caacaggaaa	gaaggatatt	gtgctctggg	tggaacttca	420
gagttgtcca	gcgaagggaac	acagcattct	tactcagagg	aagaaaaata	tgctkttggt	480
aactggataa	acaaagcttt	ggaaaatgat	cctgattgta	gacatgttat	accaatgrac	540
cctaaccaccg	atgacctgtt	caaagctgtt	ggtgatggaa	ttgtgctttg	taaaatgatt	600
aacctttcag	ttcctgatac	cattgatgaa	agagcaatca	acaagaagaa	acttacaccc	660
ttcatcattc	aggaaaaactt	gaacttggca	ctgaactctg	cttctgccat	tggtgtgcat	720
gttgtgaaca	ttggtgcaga	agatttgagg	gctgggaaac	ctcatctggt	tttgggactg	780
ctttggcaga	tcattaagat	cggtttggtt	gctgacattg	aattaagcag	gaatgaagcc	840
ttggctgctt	tactccgaga	tggtgagact	ttggagggaac	ttatgaaatt	gtctccagaa	900
gagcttctgc	ttagatgggc	aaactttcat	ttggaaaact	cgggctggca	aaaaattaac	960
aacttttagtg	ctgacatcaa	gcttattgac	ttcagtaatt	cagtgaagga	ttccaaagcc	1020
tattttccatc	ttctcaatca	aatcgaccca	aaaggacaaa	aggaaggtga	accacggata	1080
gatattaaca	tgtcagggtt	caatgaaaca	gatgatttga	agagagctga	gagtatgctt	1140
caacaagcag	ataaattagg	ttgcagacag	tttgttaccc	ctgctgatgt	tgtcagtggg	1200
aaccccaaac	tcaacttagc	tttcgtggct	aacctgttta	ataaatatcc	agcactaact	1260
aagccagaga	accaggatat	tgactggact	ctattagaag	gagaaactcg	tgaagaaaga	1320
accttccgta	actggatgaa	ctctcttggt	gtcaatcctc	acgtaaacca	tctctatgct	1380
gacctgcaag	atgccttggt	aatcttacag	ttatatgaac	gaattaaagt	tcctgttgac	1440
tggagtaagg	ttaataaacc	tccatacccg	aaactgggag	ccaacatgaa	aaagctagaa	1500
aactgcaact	atgctgttga	attagggaag	catcctgcta	aattctccct	ggttggcatt	1560
ggagggcaag	acctgaatga	tgggaaccaa	accctgactt	tagctttagt	ctggcagctg	1620
atgagaagat	ataccctcaa	tgctctggaa	gatcttggag	atggtcagaa	agccaatgac	1680
gacatcattg	tgaactgggt	gaacagaacg	ttgagtgaag	ctggaaaatc	aacttccatt	1740
cagagtttta	aggacaagac	gatcagctcc	agtttggcag	ttgtggattt	aattgatgcc	1800
atccagccag	gctgtataaa	ctatgacctt	gtgaagagt	gcaatctaac	agaagatgac	1860
aagcacaata	atgccaaagta	tgcatgttca	atggctagaa	gaatcggagc	cagagtgtat	1920
gctctccctg	aagaccttgt	ggaagttaa	cccaagatgg	tcagtactgt	gtttgcatgt	1980
ttgatgggca	ggggaatgaa	gagagtgtaa	aataaccaat	ctgaataaaa	cagccatgct	2040
cccaggtgca	tgattcgcag	gtcagctatt	tccaggtgaa	gtgcttatgg	cttaagggaac	2100
tcttgccat	tcaaaggact	tttcattttg	attaacagga	ctagcttatc	atgagagccc	2160
tcaggggaaa	gggtttaaga	aaaacaactc	ctctttccca	tagtcagagt	tgaatttgtc	2220
aggcacgcct	gaaatgtgct	catagccaaa	acattttact	ctctcctcct	agaatgctgc	2280
ccttgacatt	tcccattgct	gtatgttatt	tcttgctctg	ktawcytttg	ccctcttaga	2340
atgtccctct	cttgggactt	gcttagatga	tgggatatga	atattattag	acagtaattt	2400

tgctttccat ccagtatgct a

2421

<210> 317

<211> 1092

<212> DNA

<213> Homo sapiens

<400> 317

```
aattcggcac agattgatat tgtgtactat aatagagact ctttaaggag aatccttaaaa 60
aaaaaaaaac gtttctcact gtcttaaata gaatttttaa atagtatata ttcagtggca 120
ttttggagaa caaagtgaat ttacttcgac ttcttaaatt tttgtaaaag actataagtt 180
tagacatctt tctcattcaa atttaaagat atctttctcc tcttgatcaa tctatcaata 240
ttgatagaag tcacactagt atataccatt taatacattt acactttctt atttaagaag 300
atattgaatg caaaataatt gacatataga actttacaaa catatgtcca aggactctaa 360
attgagactc tccacatgt acaatctcat catcctgaag cctataatga agaaaaagat 420
ctagaaactg agttgtggag ctgactctaa tcaaagtga tgattggaat tagaccattt 480
ggcctttgaa ctttcatagg aaaaatgacc caacatttct tagcatgagc tacctcatct 540
ctagaagctg ggatggactt actattcttg tttatatattt agatactgaa aggtgctatg 600
cttctgttat tattccaaga ctggagatag gcagggctaa aaaggtatta ttatttttcc 660
tttaatgatg gtgctaaaat tcttcctata aaattcctta aaaataaaga tggtttaatc 720
actaccattg tgaaaacata actgttagac ttcccgtttc tgaaagaaag agcatcgttc 780
caatgcttgt tcactgttcc tctgtcatac tgtatctgga atgctttgta atacttgcac 840
gcttcttaga ccagaacatg taggtcccct tgtgtctcaa tacttttttt ttcttaattg 900
catttgttgg ctctatttta atttttttct tttaaaataa acagctggga ccatcccaaa 960
agacaagcca tgcatacaac tttggtcatg tatctctgca aagcatcaaa ttaaatgcac 1020
gcttttgtca tgtcaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1080
aaaaaaaaaa ac                                     1092
```

<210> 318

<211> 1380

<212> DNA

<213> Homo sapiens

<400> 318

```
gaagtatatg gtggcagttc tgataaggaa tttgatgaat cttcacccaa acaacctaca 60
aatccttatg catcatctaa agcagctgct gaatgttttg tacagtctta ctgggaacaa 120
tataagtttc cagttgtcat cacaagaagc agtaatgttt atggaccaca tcaatatcca 180
gaaaaggtta ttccaaaatt tatactcttg ctacagcaca acaggaaatg ttgcattcat 240
gggtcagggc ttcaaacaag aaacttcctt tatgtctactg atgtttaga agcattttctc 300
actgtcctca aaaaagggaa accagggtgaa atttataaca tcggaaccaa ttttgaaatg 360
tcagttgtcc agcttgccaa agaactaata caactgatca aagagaccaa ttcagagtct 420
gaaatggaaa attgggttga ttatgttaat gatagacca ccaatgacat gagataccca 480
atgaagtcag aaaaaatata tggcttagga tggagaccta aagtgccttg gaaagaagga 540
ataaagaaaa caattgaatg gtacagagag aattttcaca actggaagaa tgtggaaaag 600
gcattagaac cctttccggt ataatacaca tttatatagt cgagacagtt gtcaaagaag 660
aaagttatcc tacctcgcca agtgggtatga aatttaagtga ccaaatgaag tgcactcttt 720
tcttttgaaa ttagtctcat gactttctgt ataaaattca aatgcagaat gcctcaatct 780
ttggggagat ttcagtagtg gcatagaatt taaatgtcaa aattctttct gaaacccttt 840
ctcctagaaa ctaggaaata ataggtgtag aagactctcc ctaagggtag ccaggaagaa 900
gtctcctgat tcggacaacc atgaggggta gtgggtgtag ggagaaggca accttcactg 960
gttttgaaat cagtgcctaa gaaagtctct gaaatgttcg tttttaggca atataggatg 1020
```

tcttaggcc taattcacca tttctttttt aagatctgat atgctatcat tgccttaata 1080
atggaacaaa atagaagcat atctaacact ttttaattg ataattttgt aaaattgatt 1140
acgttgaatg ctttttaaga gaagtgtgta aagtttttat attttcacaa ttaacgtatg 1200
taaaaccttg tatcagaaat ttatcatgtt tactgtttta aatgattgta tttataaaat 1260
tgtcaatatc ttaatgtatt taatgtagaa tattgctttt taaaataatg tttttatttt 1320
gctgtagaaa aataaaaaaa aatttgatta taaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1380

<210> 319

<211> 2612

<212> DNA

<213> Homo sapiens

<400> 319

cacgcgtccg ccccatctga ggcgtttgtt gcagctacct gcacttctag attcatcttc 60
ttgtgagccc tgggcttagg agtcaccatg gcaactgaag agttcatcat ccgcatcccc 120
ccataccact atatccatgt gctggaccag aacagcaacg tgtcccgtgt ggaggctcggg 180
ccaaagacct acatccggca ggacaatgag agggactagt ttgcccccat gcgcatgggtg 240
accgtcccc cactgcacta ctgcacagtg gccaaccttg tgtctcggga tgcccagggc 300
ttggtgctgt ttgatgtcac agggcaagtt cggcttcgcc acgctgacct cgagatccgg 360
ctggcccagg accccttccc cctgtaccca ggggaggtgc tggaaaagga catcacaccc 420
ctgcagggtg ttctgcccac cactgccctc catctaaagg cgctgcttga ttttgaggat 480
aaagatggag acaagggtgg ggcaggagat gagtggcttt tcgagggacc tggcacgtac 540
atcccccgga aggaagtggg ggtcgtggag atcattcagg ccaccatcat caggcagaac 600
caggctctgc ggctcagggc ccgcaaggag tgctgggacc gggacggcaa ggagaggggtg 660
acaggggaag aatggctggg caccacagta ggggcgtacc tyccagcggg gtttgaggag 720
gttctggatt tgggtggacgc cgtcatcctt acggaaaaga cagccctgca cctccgggct 780
cggcggaaact tccgggactt caggggagtg tcccgccgca ctggggagga gtggctggta 840
acagtgcagg acacagaggc ccacgtgcca gatgtccacg aggaggtgct ggggggtgtg 900
cccatcacca ccctgggccc ccacaactac tgcgtgatc tcgaccctgt cggaccggat 960
ggcaagaatc agctggggca gaagcgcgtg gtcaaggag agaagtcttt ttctctccag 1020
ccaggagagc agctggaaca aggcattccag gatgtgtatg tgctgtcggg gcagcagggg 1080
ctgtgctga gggccctgca gccctggag gagggggagg atgaggagaa ggtctcacac 1140
caggctgggg accactggct catccgcgga ccctggagt atgtgccatc tgccaaagtg 1200
gaggtgggtg aggagcgcca ggccatccct ctagacgaga acgagggcat ctatgtgcag 1260
gatgtcaaga ccggaagggt gcgcgtgtg attggaagca cctacatgct gaccaggac 1320
gaagtcctgt gggagaaaaga gctgcctccc ggggtggagg agctgctgaa caaggggcag 1380
gaccctctgg cagacagggg tgagaaggac acagctaaga gcctccagcc cttggcgccc 1440
cggaacaaga cccgtgtggt cagctaccgc gtgcccaca acgctgcggg gcaggtgtac 1500
gactaccgag agaagcgagc ccgcgtggtc ttcgggcctg agctgggtgc gctgggtcct 1560
gaggagcagt tcacagtgtt gtccctctca gctgggcggc ccaagcgccc ccatgccgc 1620
cgtgcgctct gcctgctgct ggggcctgac ttcttcacag acgtcatcac catcgaaacg 1680
gcggatcatg ccaggctgca actgcagctg gcctacaact ggcactttga ggtgaatgac 1740
cggaaggacc cccaagagac ggccaagctc ttttcagtgc cagactttgt aggtgatgcc 1800
tgcaaagcca tcgcatcccg ggtgcggggg gccgtggcct ctgtcacttt cgatgacttc 1860
cataagaact cagcccgcat cattcgact gctgtctttg gctttgagac ctcggaagcg 1920
aagggccccg atggcatggc cctgcccagg ccccgggacc aggtgtcttt ccccaaaaac 1980
gggtgctgtg tcagcagtgt ggacgtgcag tcagtggagc ctgtggatca gaggaccgg 2040
gacgcccctg aacgcagcgt ccagctggcc atcgagatca ccaccaactc ccaggaagcg 2100
gcggccaagc atgaggtcca gagactggag cagggaagccc gcggccggct tgagcggcg 2160
aagatcctgg accagtcaga agccgagaaa gctcgcaagg aacttttgga gctggaggct 2220
ctgagcatgg ccgtggagag caccgggact gccaaaggcg aggccgagtc ccgtgcggag 2280

```

gcagcccgga ttgagggaga aggggtccgtg ctgcaggcca agctaaaagc acaggccttg 2340
gccattgaaa cggagggtga gctccagagg gtccagaagg tccgagagct ggaactggtc 2400
tatgcccggg cccagctgga gctggagggtg agcaaggctc agcagctggc tgagggtggag 2460
gtgaagaagt tcaagcagat gacagaggcc ataggcccca gcaccatcar ggaccttgct 2520
gtggctgggc ctgagatgca ggtaaaactg ctccagtcctc tgggcctgaa atcaaccctc 2580
atcacgatg gcttcamttc catcaacttc tt 2612

```

<210> 320

<211> 943

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (52)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (54)

<223> n equals a,t,g, or c

<400> 320

```

gcaccacagc gctccagcct ggctcgacaga gtgagactcc atctcaagaa anantaaaaa 60
taaagttggt ctctgaagag caaatgtctc attccagtaa tgaccactc agcaggaata 120
tggtggaggt cagtccaatt caggtcagcc atatccaaaa gaccacaagt cattactaag 180
ttgagcaaaa gagtttttat ctattagcag aaagggcctc tctggcagca gagattaaaa 240
actggcccaa cttcatttcc atacttcagg gaacagcaaa ttgaggattt acttatctag 300
gacttgaatt cttcttttgg gaccaagtta ataaaagacc aagaaactcc tgattaaact 360
ggataatgaa ggattctgta gacagggctg cacgtatcgg ctttgtttga cttctctttt 420
ctcagttaac atctcagagc tagaacattc cacattcccc agcagcgtgt gggggctgac 480
taaagtttac aattccaact aaaaatcacc ctgcttctgg cttatctgaa tcccttacct 540
acccaccccc accaccctac tcctatttat tcagcaccac actaccagc aaatacacta 600
gcaaattgtg caatggaata aaatccacac tttagattct tgcaactgta tcatatgtaa 660
tagtatcact ttttctacat tttgggtcaaa taaataggag taggggtggt ggggtggggtg 720
ggtaagggat tcagataagc cagaagcagg gtgattttwa gttggaattg taaacttttag 780
tcagcccccac cagctgctg ggggaatgtg atgttctagc tctgagatgt taactgrgaa 840
aagagaagtc aaacaaagcc gatacgtgca gccctgtcta cagaatcctt cattatccag 900
tttaataagg agtttcttgg tcttttatta acttgggtcg acc 943

```

<210> 321

<211> 2959

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (2948)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2956)

<223> n equals a,t,g, or c

<400> 321

```
ccattcccgg gtcgaccac gcgtccgctg gaaatttggg ttctccagaa ggtgggtttcg 60
atgccatcat gcaagttgca gtttgtggat cactgattgg ctggagggaat gttacacggc 120
tgctgggtgtt ttccacagat gccgggtttc actttgctgg agatgggaaa cttggtggca 180
ttgttttacc aaatgatgga caatgtcacc tggaaaataa tatgtacaca atgagccatt 240
attatgatta tccttctatt gctcaccttg tccagaaact gagtgaaaat aatattcaga 300
caatttttgc agttactgaa gaatttcagc ctgtttacaa ggagctgaaa aacttgatcc 360
ctaagtcagc agtaggaaca ttatctgcma attctagcaa tgtaattcag ttgatcattg 420
atgcatacaa ttccctttcc tcagaagtca ttttgaaaaa cggcaaattg tcagaaggmg 480
taacaataag ttacaaatct tactgcaaga acggggtgaa tggaaacagg gaaaatggaa 540
gaaaatgttc caatatctcc attggagatg aggttcaatt tgaaattagc ataacttcaa 600
ataagtgtcc aaaaaaggat tctgacagct ttaaaattag gcctctgggc tttacggagg 660
aagtagaggt tattcttcag tacatctgtg aatgtgaatg ccaaagcgaa ggcatccctg 720
aaagtcccaa gtgtcatgaa ggaaatggga catttgagtg tggcgcgtgc aggtgcaatg 780
aaggcgctgt tggtagacat tgtgaatgca gcacagatga agttaacagt gaagacatgg 840
atgcttactg caggaaagaa aacagttcag aaatctgcag taacaatgga gagtgcgtct 900
gcggacagtg tgttttagag aagagggata atacaaatga aattttattct ggcaaattct 960
gcgagtgtga taatttcaac tgtgatagat ccaatggctt aatttgtgga ggaaatgggtg 1020
tttgcaagtg tcgtgtgtgt gagtgaacc ccaactacac tggcagtgcg tgtgactgtt 1080
ctttggatac tagtacttgt gaagccagca acggacagat ctgcaatggc cggggcatct 1140
gcgagtgtgg tgtctgtaag tgtacagatc cgaagtttca agggcaaacg tgtgagatgt 1200
gtcagacctg ccttgggtgtc tgtgtgtgag ataaagaatg tgttcagtgc agagccttca 1260
ataaaggaga aaagaaagac acatgcacac aggaatgttc ctattttaac attaccaagg 1320
tagaaagtcg ggacaaatta cccagccggg tccaacctga tcctgtgtcc cattgtaagg 1380
agaaggatgt tgacgactgt tggttctatt ttacgtattc agtgaatggg aacaacgagg 1440
tcatggttca tgttgtggag aatccagagt gtcccactgg tccagacatc attccaattg 1500
tagctggtgt ggttgtctgga attgttctta ttggccttgc attactgctg atatggaagc 1560
ttttaatgat aattcatgac agaagggagt ttgctaaatt tgaaaaggag aaaatgaatg 1620
ccaaatggga caggggtgaa aatcctatth ataagagtgc cgtaacaact gtggtcaatc 1680
cgaagtatga gggaaaatga gtactgcccg tgcaaatccc acaacactga atgcaaagta 1740
gcaatttcca tagtcacagt taggtagctt tagggcaata ttgccatggt tttactcatg 1800
tgcaggtttt gaaaatgtac aatatgtata atttttaaaa tgttttatta ttttgaanaat 1860
aatgttgtaa ttcattgccag ggactgacaa aagacttgag acaggatggt tattcttgtc 1920
agctaaggtc acattgtgcc tttttgacct tttcttcctg gactattgaa atcaagctta 1980
ttgattaag tgatatttct atagcgattg aaagggcaat agttaaaagta atgagcatga 2040
tgagagtttc tgtaaatcat gtattaaaac tgatttttag ctttacaana atgtcagttt 2100
gcagttatgc agaataccaa gtaaatgtcc tgctagctag ttaaggattg ttttaaactc 2160
gttattttgc tatttgacct ttagacatga ctgatgacat atctgaaaga caagtatgtt 2220
gagagttgct ggtgtaaaaa acgtttgaaa tagttgatct acaaaaggcca tgggaaaaat 2280
tcagagagtt aggaaggaaa aaccaatagc tttaaaacct gtgtgccatt ttaagagtta 2340
cttaatgttt ggtaactttt atgccttcac tttacaaatt caagccttag ataaaagaac 2400
cgagcaattt tctgtcaaaa agtccttgat tttagactat ttacatacag gccatacttt 2460
acaaagtatt tgctgaattg ggaccttttg agttgaattt attttattat ttttattttg 2520
tttaatgtct ggtgtcttct atcacctctt ctaactcttt aatgtatttg tttgcaattt 2580
tggggttaaga ctttttttat gagtactttt tctttgaagt tttagcggtc aatttgccct 2640
tttaatgaac atgtgaagtt atactgtggc tatgcaacag ctctcaccta cgcgagtctt 2700
actttgagtt agtgccataa cagaccactg tatgtttact tctcaccatt tgagttgccc 2760
```

```
atcttggttc acactagtca cattcttggt ttaagtgcct ttagttttaa cagttcactt 2820
tttacagtgc tatttactga agttatttat taaatatgcc taaaatactt aaatcggatg 2880
tcttgactct gatgtatttt awcagggtgt gtgcatgaaa tttttataga taaagragtt 2940
gaggaaanaa aaaaanaaa 2959
```

<210> 322

<211> 802

<212> DNA

<213> Homo sapiens

<400> 322

```
ggcacagctg gaggcgcggg agggcagcga gaggttcgcg ggtgcagcgc acaggagacc 60
atgtccgggg gcagcagctg cagccagacc ccaagccggg ccatccccgc cactcgccgg 120
gtggtgctcg gcgacggcgt gcagctcccc cccggggact acagcacgac ccccggcggc 180
acgctcttca gcaccacccc gggagggtacc aggatcatct atgaccggaa attcctgatg 240
gagtgtcggg actcacctgt gaccaaaca ccccaaggg atctgcccac cattccgggg 300
gtcaccagcc cttccagtga tgagcccccc atggaagcca gccagagcca cctgcgcaat 360
agcccagaag ataagcgggc gggcggtgaa gagtcacagt ttgagatgga catttaaagc 420
accagccatc gtgtggagca ctaccaaggg gccctcagg gccttcctgg gaggagtccc 480
accagccagg ccttatgaaa gtgatcatac tgggcaggcg ttggcgtggg gtcggacacc 540
ccagcccttt ctccctcact cagggcacct gcccctcct ctctgtgaac accagcagat 600
acctccttgt gcctccactg atgcaggagc tgccacccca aggggagtga cccctgccag 660
cacaccctcg cwgcyggggg sgcaaccacc ccttccttag gttgatgtgc ttgggaaagc 720
tccttcccc tccttcccc aagagaggaaa taaaagccmc cttcgcccta gggccaaraa 780
aaaaaaaaa aaaaaaaaaa aa 802
```

<210> 323

<211> 1724

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1590)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1650)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1701)

<223> n equals a,t,g, or c

<400> 323

```
gcagcctgcc agccgcgctg ctgctgctcc tcctgctgtg ggaccgctga ccgcgcggct 60
gctccgctct ccccgctcca agcgccgcat tgggcaccgc ccaccagcat ggacgctcgc 120
cgcggtgccg agaaaagatct cagagtaaa aagaacttaa agaaattcag atatgtgaag 180
ttgatttcca tggaaacctc gtcacacctc gatgacagtt gtgacagctt tgcttctgat 240
```

```

aattttgcaa acacgaggct gcagtcagtt cgggaaggct gtaggaccg cagccagtgc 300
aggcactctg gacctctcag ggtggcgatg aagtttccag cgcggagtac caggggagca 360
accaacaaaa aagcagagtc ccgccagccc tcagagaatt ctgtgactga ttccaactcc 420
gattcagaag atgaaagtgg aatgaatttt ttggagaaaa gggttttaa tataaagcaa 480
aacaaagcaa tgcttgcaaa actcatgtct gaattagaaa gcttccctgg ctcggtccgt 540
ggaagacatc cctcccaggg ctccgactca caatcaagga gaccgcgaag gcgtacattc 600
ccgggtgttg cttccaggag aaaccctgaa cggagagctc gtcctcttac caggtcaagg 660
tcccggatcc tcgggtccct tgacgctcta cccatggagg aggaggagga agaggataag 720
tacatgttgg tgagaaagag gaagaccgtg gatggctaca tgaatgaaga tgacctgcc 780
agaagccgtc gctccagatc atccgtgacc cttccgcata taattcgccc agtgaagaa 840
attacagagg aggagttgga gaacgtctgc agcaattctc gagagaagat atataaccgt 900
tcaactgggt ctacttgtca tcaatgccgt cagaagacta ttgataccaa aacaaactgc 960
agaaacccag actgctgggg cgctcgaggc cagttctgtg gccctgcct tcgaaaccgt 1020
tatggtgaag aggtcaggga tgctctgtg gatccgaact ggcatgccc gccttgctga 1080
ggaatctgca actgcagttt ctgccggcag cgagatggac ggtgtgcgac tggggtcctt 1140
gtgtatttag ccaaatatca tggctttggg aatgtgcatg cctacttgaa aagcctgaaa 1200
caggaatttg aaatgcaagc ataatatctg gaaaatttgc tgctgcctt ctacttctca 1260
aatctttctt gtaaaagttt ccaatttttt cactgaaacc tgagttaaaa atcttgatga 1320
tcagcctgtt tcataagaaa ctccaatcaa gttaatctta gcagacatgt gtttctggag 1380
catcacagaa ggtatattgc tagttacact ttgccctcct gcagtttctt ctctgctccc 1440
aaccctcatc tcatagcatc cccctctatt tccaatgtc ctctccaacc gcttagtttc 1500
tgaatttctt ttaaattaca gttttatgaa agcatatttt atttacttgg tgttgaaata 1560
gccctyataa aacctaagca cttggaaacn caataatagt attaactaac tagatctatt 1620
gaatttcaga gaagagccta aatagcaaan tttacacaaa aacgagtatg atttagcact 1680
catactagtt gagggtttgg ngccgatagc gactgctaata gaac 1724

```

<210> 324

<211> 2261

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1098)

<223> n equals a,t,g, or c

<400> 324

```

cccagatggt aggccaacag gggacgcttt tgtcctcttt gcctgtgagg aatatgcaca 60
gaatgcgttg aggaagcata aagacttggt gggtaaaaga tacattgaac tcttcaggag 120
cacagcagct gaagttcagc aggtgctgaa tcgattctcc tcggccctc tcattccact 180
tccaaccct cccattattc cagtactacc tcagcaattt gtgcccccta caaatgttag 240
agactgtata cgccttcgag gtcttcccta tgcagccaca attgaggaca tcctggattt 300
cctgggggag ttcgccacag atattcgtag tcatgggggt cacatgggtt tgaatcacca 360
gggccgccca tcaggagatg cctttatcca gatgaagtct gcggacagag catttatggc 420
tgacagaaag tgtcataaaa aaaacatgaa ggacagatat gttgaagtct ttcagtgttc 480
agctgaggag atgaactttg tggttaatggg gggcacttta aatcgaaatg gcttatcccc 540
accgcatgct ctgtctcctc cctcctacac atttccagct cctgctgcar ttattcctac 600
araarctgcc atttaccagc cctctgtgat tttgaatcca cgagcactgc agccctycac 660
agcgtactac ccagcaggca ctcagctctt catgaactac acagcgtact atcccagtgt 720
ttgaaagatg tatggtgatc ttgaaacctc cagacacaag aaaacttcta gcaaattcag 780
gggaagtgtt tctacactca ggctgcagta ttttcagcaa acttgattgg acaaacgggc 840

```

ctgtgcctta tcttttggtg gagtgaaaaa atttgagcta gtgaagccaa atcgtaactt 900
acagcaagca gcatgcagca tacctggctc tttgctgatt gcaaataaggc atttaaaatg 960
tgaatttgga atcagatgtc tccattactt ccagttaaag tggcatcata ggtgtttcct 1020
aagttttaag tcttggataa aaactccacc agtgtctacc atctccacca tgaactctgt 1080
taaggaagct tcatttttngt atattcccgc tcttttctct tcatttcctt gtcttctgca 1140
taatcatgcc ttcttgctaa gtaattcaag cataagatct tggaataata aaatcacaat 1200
cttaggagaa agaataaaaat tgttattttc ccagtctctt ggccatgatg atatcttatg 1260
attaaaaaca aattaaaattt taaaacacct gaagatawat tagaagaaat tgtgcaccct 1320
ccacaaaaca tacaaagttt aaaagtttgg atctttttct cagcaggat cagttgtaaa 1380
taatgaatta ggggccaaaa tgcaaaacga aaaatgaagc agctacatgt agtttagtaat 1440
ttctagtttg aactgtaatt gaatattgtg gcttcatatg tattatttta tattgtactt 1500
ttttcattat tgatggtttg gactttaata agagaaattc catagttttt aatatcccag 1560
aagtgaagca atttgaacag tgtattctag aaaacaatac actaactgaa cagaagtga 1620
tgcttatata tattatgata gccttaaacc tttttcctct aatgccttaa ctgtcaaata 1680
attataacct tttaaagcat aggactatag tcagcatgct agactgagag gtaaacactg 1740
atgcaattag aacagggtact gatgctgtca gtgtttaaca ctatgtttag ctgtgtttat 1800
gctataaaag tgcaatatta gacactagct agtactgctg cctcatgtaa ctccaaagaa 1860
aacaggattt cattaagtgc attgaatgtg gmtatttctc taagtactc atattgtcct 1920
ttgcttgaat gcaatgccgt gcagatttat gwggctgcta tttttatttt ctgtgcatta 1980
ctttaacacc ttaaagggag aagcaaacat ttccttcttc agctgactgg caatggccct 2040
ttaactgcaa taggaagaaa aaaaaaaagg tttgtgtgaa aattggtgat aactggcact 2100
taagatcgaa aagaaatttc tgtatacttg atgccttaag atgcccaaag ctgcccaaag 2160
ctctgaaaga ctttaagata ggcagtaatg cttactacaa tactactgag tttttgtaga 2220
gttaacattt gataataaaa cttgcctgtt taatctcaaa a 2261

<210> 325

<211> 1213

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1213)

<223> n equals a,t,g, or c

<400> 325

tggagcgcgtg ggtcgaccca cgcgtccggt caaaaytaac cccctaataa aattaattaa 60
ccactcatte atcgacctcc ccaccccatc caacatctcc gcatgatgaa acttcggctc 120
actccttggc gcctgcctga tcctccaaat caccacagga ctattcctag ccatgcacta 180
ctcaccagac gcctcaaccg ccttttctac aatcgcccac atcactcgag acgtaaatta 240
tggtgaatc atccgctacc ttcacgcaa tggcgctca atattcttta tctgcctctt 300
cctacacatc gggcgaggcc tatattacgg atcatttctc tactcagaaa cctgaaacat 360
cggcattatc ctctgcttg caactatagc aacagccttc ataggctatg tcctcccgtg 420
aggccaaata tcattctgag gggccacagt aattacaaac ttactatccg ccatcccata 480
cattgggaca gacctagtgc aatgaatctg aggaggctac tcagtagaca gtcccaccct 540
cacacgattc tttaccttct acttcatctt gcccttcatt attgcagccc tagcagcact 600
ccacctcta ttcttgacag aaacgggatc aaacaacccc ctaggaatca cctccattc 660
cgataaaatc acctccacc cttactacac aatcaaagac gccctcggt tacttctctt 720
ccttctctcc ttaatgacat taacactatt ctcaccagac ctctaggcg acccagacaa 780
ttatacccta gccaacccct taaacacccc cccccacatc aagcccgaat gatatttctt 840
attgcctac acaattctcc gatccgtccc taacaaacta ggaggcgctc ttgcctatt 900

```

actatccatc ctcatcctag caataatccc catcctccat atatccaaac aacaaagcat 960
aatatttcgc ccactaagcc aatcacttta ttgactccta gccgcagacc tcctcattct 1020
aacctgaatc ggaggacaac cagtaagcta cccttttacc atcattggac aagtagcatc 1080
cgtactatac ttcacaacaa tcctaatacct aataccaact atctccctaa tkgaaaacaa 1140
aataactcaa tgggcctaaa aaaaaaaaaa aaaaacycgg ggggggggccg ggtwcccaat 1200
ttcccccccta ggn 1213

```

<210> 326

<211> 2764

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (372)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2128)

<223> n equals a,t,g, or c

<400> 326

```

gccggagcaa ggctgagctg ctccgcagca tcgccaagag gaaggagcgc ctggccatcc 60
tggaacagtca ggctgggcag atccgggctc aggccgkca rgartcagaa cgcctggccc 120
gggacaagaa tgccctcctta cagctgctgc aaaaggagaa ggagaagctg actgtgctgg 180
aaaggagata ccactcactc acagggggca ggcctttccc gaagaccaca tcgacctca 240
aagaggttta ccgctccaag atggatggcg aggccaccag ccccttccc cggaccgcga 300
gcggccctc cctcctcct ctggtctctc ctccctcctc tcccagctca gcgtggtac 360
cctggggcgt ancycckccc caaagagcgc tctactcacc cagaatggca cgggcagcct 420
tcctcgcaac ctggcagcca cactgcagga catcgagacc aagcgccaac tagctctgca 480
gcagaagga caacaagtga ttgaagagca gcggcggcga ctggctgagc tgaagcagaa 540
agcggcagtg aggcacagt ccagtgggat gcccttcacg gggcagcacc cttcccagcg 600
ggccctcctg gcttcccccc tctcatgcac cactctatcc tacaccacct gcctgcgggg 660
cgggagcgtg gggaggagg tgagcacgcc tatgatacgc tgagtctgga gagctctgac 720
agcatggaga ccagcatctc caccgggggc aactcggtg ctcccctgac aacatgtcca 780
gcgcgagtgg tctggacatg gggaaagatcg aggagatgga gaagatgctg aaagaggctc 840
atgcagagaa gaaccggctc atggagtcga gggagcggga gatggagctg cggcggcagg 900
ccctggagga ggagcggcgg aggcgkaca ggtagaacgg aggctgcaga gtgagagtgc 960
ccggaggcag cagctggtcg agaaggaggt caagatgcgg gagaaacaat tttcccaggc 1020
acgacctctg acccgctacc tgccaatccg gaaggaggac tttgacctga agacacatat 1080
tgagtcmtcg ggccatggtg ttgatacctg cctgcacgtg gtgctcagca gcaaggctctg 1140
ccgtggtac ttggtcaaga tgggcggcaa gattaaatca tggaagaarc gctggtttgt 1200
cttcgaccgg ctcaagcgca ccctttccta ttatgtggac aagcatgaga cgaagctgaa 1260
aggagtcatc tatttccarg ccattgaagg aagtgtacta cgaccacctg cgccagtgc 1320
gccaaagaaga ggtttttccg cttccactat ggtgactgag aagcccgaac ccagccctca 1380
ccttctgcgt aaagacccat gaccggctgt aytacatggt ggccccatct gcagaggcca 1440
tgctgatctg gatggatgtc attgtcacag gggctgaggg ctacactcag ttcatgaact 1500
aactgcctg ggcctcctgg cagagcacaa ctggggcttt tgtataagaa gactttaata 1560
ttctgtaagg agcttggtcc tgtgagttt tgggtctggt cctcctgaag aaccagccag 1620
aagaagaaaa gtgagagtggt ctttgctgcc tcctgggagc ccagaacttg cagtaaccct 1680

```



```

ttaggtcctg ccccaggccc agccagggct gaggagctgt cacagagagg gcctcagctc 1740
tgacctgaca cctgctctcc ccagcctgtt ttctcttttc taaaagacaa attatggtac 1800
cataagctgc caaagatccc ctctgcctc agaccccttt gccaggggct ttgggggctg 1860
agcagagcca catccagagt ggggtaatag ctcaggcggc ccgcttccca tttctcaaac 1920
cccgtctgc cccattgttc tcctttccct tatacttttt attaccttgc tcaagggcca 1980
gagatctcaa gtgtcaacct tgaggtccca gctccatccc ctagttagcag actcatcacc 2040
atggttacca tagtgactgc ttcattgcca tggttacata ctaattgctg cagctctgtg 2100
gcccagccca ctgcttcagc tgtgggcnat ctgagggtag gtgccatcat ctctccagcc 2160
caggccccctg ggcattctcat gctgggggga agggactgaa tacctttttc cttccccctg 2220
cctgtgtctt cagccctgat gcacaggctg ccagccccc agtccagccc tctcccttcc 2280
actggtgcct tgcttagagc cagaagggat gaagccgggg gatctatgga acagaggagg 2340
agcgatgcag ttgggagagg aagctagaag gggttatggt ggagttctgt acagtgttga 2400
gtttccgaca gggaaagagg attcctccaa tgctcctaga gagaaagcct gagcaggaga 2460
tgatgcagca gagggaagg gccctgtggt gccgcccgc ttccttcagc ctccgaagg 2520
tgatggaaat ggagagtga ggaccaggcc tccagctgtc tggcctcgcc cttcacgcct 2580
taacactaag cccacctccc ctgctctcct tcccagcatt gagcccttgg ttgcctgggc 2640
ccaggctggg gggttttcagt atttgtaagc atttcagcag aacaataaag cttttggact 2700
acgraaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaggagg 2760
gggc

```

<210> 327

<211> 1764

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1398)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1758)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1759)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1762)

<223> n equals a,t,g, or c

<400> 327

```

ggacatcaaa gatgaggagc ctggagactt tgggccgacc gaagcctgaa tgtgaggggtt 60
acgaccccaa cgccctgtat tgcatattgcc gccagcctca caacaacagg tttatgattt 120
gctgtgaccg ctgtgaagaa tggtttcatg gcgattgtgt gggcatttct gaggctcgag 180
ggaggtcttt ggaaaggaat ggggaagact atatctgccc aaactgcacc attctgcaag 240
tgcaggatga gactcattca gaaacggcag atcagcagga agctaaatgg agacctggag 300

```

```
atgctgatgg caccgattgt acaagtatag gaacaataga gcagaagtct agcgaagacc 360
aagggataaa gggtagaatt gagaaagctg caaatccaag tggcaagaag aaactcaaga 420
tcttccagcc tgtgatagag gcgcctgggtg cctcaaaatg tattggcccc ggggtgctgtc 480
acgtggcgca cccgactcgg tgtactgcag taatgactgt atcctcaaac acgccgcagc 540
gacaatgaag tttctaagct caggtaaaga acagaagcca aagcctaaag aaaagatgaa 600
gatgaagcca gagaagccca gtcttccgaa atgcgggtgct caggcaggta ttaaaatctc 660
ttctgtgcac aagagaccag ctccagaaaa aaaagagacc acagtgaaga aggcagtggg 720
ggccccctgc cggagtgaag cactcgggaa ggaagcagct tgtgagagca gcacgccgtc 780
gtgggcgagc gatcacaatt acaatgcagt aaagccagaa aagactgctg ctccctcgcc 840
gtcactgttg tataaatgta tgtatcacct aggggttggc ctccctggacc cctccccgtc 900
tttctggata gccatccccct gggcctgtcc aggactggga gttgcagctt tgtgttaagc 960
tgatcacaga caccggctgc accatcagcg ggaagcagag cccatgtcca ggatgcctcc 1020
tgctgccttg tgtccatccc tagtctgtca ggacttcctg tctactgttt ccaaagctgt 1080
aaacctcact ggtgaacgtt caccttaatg attgattctt taatctctgt tttcactctc 1140
aggctctggg aagtattcgt attctcttca tcccagtcgt attgcatagc cacactgccc 1200
ggcacgccac atccaccctt gtctgcacat gagggttctt gacaacagcg ctgtatacgc 1260
ttcagttttt ccacattgtc cacggccagc acatgaaagc atcacttctt ttttatgttg 1320
tggaatctt tgcaagttag tggtgcatct gattttcagg tgtacattta ttttgactg 1380
ggcagatagg ggatttntt ttttccatgt ccgattcaca cgctacacac ccacatgaac 1440
acattcgaac ttcgaaggcc acacactcct gcttcatagg cccacaggta agtgagtcca 1500
cacctagaac actgtcctga ccgcaggacg cgtgccttgg acttggtatt ctacatgtga 1560
ctggctttct tgccctcgtc tcttgaatgt ttagactctt aagatcatat cctgccccaa 1620
atttcaaatt aatgaaatga agatatttca aacagatctt tgaaacctca gattctgtgg 1680
tgcaatttta atgttttctt gtttctcagt tttctgctat aaaactattt tcaattcagt 1740
ctttaaaaaa aaaaaaannt cnaa 1764
```

<210> 328

<211> 571

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (7)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (535)

<223> n equals a,t,g, or c

<400> 328

```
gcccantac tttccagccc agtaaggggt atttcaggag agcagtccac tkaaggttct 60
ttccctttaa gatatgtgca ggatcaagtt gcggcacctt ttcagctgag taaccacact 120
ggccgcatca aggtgggtctt tactccgagc atctgtaaag tgacctgcac caagggcagc 180
tgtcagaaca gctgtgagaa ggggaacacc accactctca ttagtgagaa tggatcatgt 240
gccgacaccc tgacggccac gaacttccga gtggttaattt gccatcttcc atgtatgaat 300
gggtggcagtg gcagtccaag ggacaaatgt cagtgccttc caaatttcac aggaaaactt 360
tgtcagatcc cagttccatgg tgccagcgtg cstaaacttt atcagcattc ccagcagcca 420
ggcaaggcat tgggggacgca tgtcatccat tcaacacata ccttgccctt gaccgtgact 480
agccagcagg agtcaaagtg aaatttcctc cttaacatag tcaatatcca tgtgnaacat 540
```

cctcctgaag cttccgtcca gatacatcag g

571

<210> 329

<211> 473

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (37)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (449)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (467)

<223> n equals a,t,g, or c

<400> 329

cacgtagtaa	tctttaaata	taaatagcca	cgtgtgnact	actatcatat	gggacagaac	60
agttccagac	cacattattg	ataagatgtg	ttaaaataaa	taagatcttt	ctgtgaactt	120
ttgggaacca	aatggttttg	ggcatgattt	cccagctcat	tatatattga	cacagaattt	180
tttcagaatg	gcatttacta	gtaccccaga	aatttagcaa	agtatagtta	ggtacttatt	240
gtaaaatata	ttgcatattt	gatttaaggt	ttgttatgaa	cacactaatc	tgatatttta	300
tatttaaacc	atthtcaatk	ctgtaagact	cagtaagagc	tatttaatta	tactgwaaca	360
aagaaaatct	ataaataaat	agcacaaata	ggcacatgcg	ggtgtataat	actgaagtgg	420
tagtttttaa	ttccgaaga	gaataagcnt	ttcaggccca	ttagaancac	aga	473

<210> 330

<211> 1335

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (865)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1004)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1156)

<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1301)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1328)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1333)
<223> n equals a,t,g, or c

<400> 330
ggcgctactg aggccgcgga ccggactgcg gttggggcgga gaagagccgg ggccgtggct 60
gacatggagc agccctgctg ctgaggccgc gccctccccg ccctgaggtg ggggcccacc 120
aggatgagca agctgccag ggagctgacc cgagacttgg agcgagctg cctgccgtgg 180
cctccctggg ctccctactg tcccacagcc agagcctctc ctgcacctc cttccgccgc 240
ctgagaagcg aagggccatc tctgatgtcc gccgcacctt ctgtctcttc gtcaccttcg 300
acctgctctt catctccctg ctctggatca tcgaactgaa taccaacaca ggcatccgta 360
agaacttgga gcaggagatc atccagtaca actttaaaac ttccttcttc gacatctttg 420
tcctggcctt cttccgcttc tctggaactgc tcctaggcta tgcgtgctgc rgctccggca 480
ctggtgggtg attgcggtca cgacgctggg gtccagtga ttcctcattg tcaaggatcat 540
cctctctgag ctgctcagca aaggggcatt tggctacctg ctccccatcg tctcttttgt 600
cctcgcttg tggagacct gggttccttga cttcaaagtc ctaccccagg aagctgaaga 660
ggagcgatgg tatcttgccg ccaggttgc tgttgcccg ggaccctgc tgttctccgg 720
tgstctgtcc gagggacatt ctattcacc ccagaatcct ttgcagggtc tgacaatgaa 780
tcagatgaag aagttgctgg gaagaaaagt ttctctgctc aggagcgga gtacatccgc 840
caggggaagg aggccacggc agtgntggac cagatcttgg cccaggaaga gaactggaag 900
tttgagaaga ataataaata tggggacacc gtgtacacca ttgaagttcc ctttcacggc 960
aagacgttta tcctgaagac ctccctgccc tgcctgctg astncgtgta ccaggaggtg 1020
atcctgcagc ccgagaggat ggtgctgtgg aacaagacag tgactgcctg ccagatcctg 1080
cagcgagtgg aagacaacac cctcatctcc tatgacgtgt ctgcaagggg ctgcgggagg 1140
cgtkgtcttc cccaanggac ttcgtgaatg tccggcgcat tgarcgggcg agggaccgat 1200
acttgttcat cagggatcgc caccttcaca cagtgccaa ccccgacgc acaaatatgt 1260
tccggggaga gaatggcctg ggggtttcat cgtggttcaa ntcggccatt aacccctgt 1320
tttgcacntt gtntg 1335

<210> 331
<211> 1046
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (982)
<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (997)

<223> n equals a,t,g, or c

<400> 331

```
ggtaaaacag agagcaacat gccccagtc ctcctctctg ccagttcttg tggcagcccc 60
attggcctgg agacatggtt ttttgtggtt gcagctgcag ctgtccccc gtcttttaac 120
tcgacatcaa aagcctctct cctgccagtg ccatagggtt gttagagcta ctgttttgta 180
acagctgtct aggtgtcccc aaactcctgg agttttccac cctgagctgt taaaaacctg 240
ccctgcctgt caccatttct tgtgccacca gcccaccccc tgccctccact ctccctccctg 300
ccaccttctg tccctgccat aggaatatgg ggacaccgtg tacaccattg aagtccctt 360
tcacggcaag acgtttatcc tgaagacctt cctgccctgt cctgcggagc tcgtgtacca 420
ggaggtgatc ctgcagcccc agaggatggt gctgtggaac aagacagtga ctgcctgcca 480
gatcctgcag cgagtggaa acaacacctt catctcctat gacgtgtctg caggggctgc 540
gggcggcgct gtctcccaa gggacttcgt gaatgtccgg cgcattgagc ggcgcagggg 600
ccgatacttg tcatcaggga tcgccacctt acacagtgcc aagccccga cgcacaaata 660
tgtccgggga gagaatggcc ctgggggctt catcgtgctc aagtcggcca gtaacccccg 720
tgtttgcacc tttgtctgga ttcttaatac agatctcaag ggccgcctgc cccggtacct 780
catccaccag agcctcgagg ccaccatgtt tgaatttgcc ttccacctgc gacascgcat 840
cagcgagctg ggggcccagg cgtgactgtg cccctcccca ccctgcgggc cagggctcctg 900
tcgccaccac ttccagagcc agaaagggg ccagttgggc tcgcactgcc cacatggggac 960
ctggccccag gcwgtmamcc tncamcgagc cagcantcc tgggagttga tgaagtgaaca 1020
gstttgggtg gacattggat tcgggg 1046
```

<210> 332

<211> 1311

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1280)

<223> n equals a,t,g, or c

<400> 332

```
ggcggcacca gcggcggcgc tctgtgtgga gaagcagggg cwgtgctgc cgctgctgct 60
gcacgaatcg ccgcagcccc cagccttgcg cgtcgtcgct acctcctcgg acaggtgaga 120
agcagcccag aaattttatg aataagcatc agaagccagt gctaacaggc cagcggttca 180
aaactcggaa aagggatgaa aaagagaaat tcgaaccac agtcttcagg gatacacttg 240
tccaggggct taatgaggct ggtgatgacc ttgaagctgt agccaaattt ctggactcta 300
caggctcaag attagattat cgtcgctatg cagacacact cttcgatatc ctgggtggctg 360
gcagtatgct tgcccctgga ggaacgcgca tagatgatgg tgacaagacc aagatgacca 420
accactgtgt gttttcagca aatgaagatc atgaaacat ccgaaactat gctcaggtct 480
tcaataaact catcaggaga tataagtatt tggagaaggc atttgaagat gaaatgaaaa 540
agcttctcct ctcccttaaa gccttttccg aaacagagca gacaaagttg gcgatgctgt 600
cggggattct gctgggcaat ggcacctgc ccgccaccat cctcaccagt ctcttcaccg 660
acagcttagt caaagaaggc attgcggcct ctttctgtgt caagcttttc aaagcagga 720
tggcagaaaa agatgccaac tctgttacct cgtctttgag aaaagccaac ttagacaaga 780
ggctgcttga actctttcca gttaacagac agagtgtgga tcattttgct aaatacttca 840
ctgacgcagg tcttaaggag ctttccgact tcctccgagt ccagcagtc ctagggcacca 900
```

```
ggaaggaact gcagaaggag ctccaggagc gtcttttctca ggaatgcccg atcaaggagg 960
tggtgcttta tgtcaaagaa gaaatgaaga ggaatgatct tccagaaaca gcagtgattg 1020
gtcttctgtg gacatgtata atgaacgctg ttgagtggaa caagaaggaa gaacttggtg 1080
cagagcaggc tctgaagcac ctgaagcaat atgctcccct gctggccgtg ttcagctccc 1140
aaggccagtc agagctgatc ctccctccaga aggttcagga atactgctac gacaacatcc 1200
atttcatgaa agccttttcag aagattgtgc ttccttatac catttcagta ttgcttcttc 1260
gctcagaaca tcagctttan tcgtgccgat tcggcacgag cggcacgagc c 1311
```

<210> 333

<211> 1444

<212> DNA

<213> Homo sapiens

<400> 333

```
ggcagagccc ggcctcttgg tactgctgac cccagccagg ctacagggat cgattggagc 60
tgtccttggg gctgtaattg gccccagctg agcagggcaa acactgaggt caactacaag 120
ccacaggccc cttccccagc ctcagttcac agctgccctg ttgcaggagg gcggtggccc 180
ttctgttgct agaccgagcc tgtgggatat accaaggcag aggagcccat agccatgagg 240
agcctcgggg ccctgctctt gctgctgagc gcctgcctgg cggtgagcgc tggccctgtg 300
ccaacgccgc ccgacaacat ccaagtgcag gaaaacttca atatctctcg gatctatggg 360
aagtgttaca acctggccat cggttccacc tgcccctggc tgaagaagat catggacagg 420
atgacagtga gcacgctggt gctgggagag ggcgctacag aggcggagat cagcatgacc 480
agcactcggt ggcggaaggg tgtctgtgag gagacgtctg gagcttatga gaaaacagat 540
actgatggga agtttctcta tcacaaatcc aaatggaaca taacctgga gtcctatgtg 600
gtccacacca actatgatga gtatgccatt ttcctgacca agaaattcag ccgccatcat 660
ggaccaccca ttactgcca gctctacggg cgggcgccgc agctgaggga aactctcctg 720
caggacttca gagtgggtgc ccagggtgtg ggcacccctg aggactccat cttcaccatg 780
gctgaccgag gtgaatgtgt ccctggggag caggaaccag agcccacctt aatcccgaga 840
gtccggaggg ctgtgctacc ccaagaagag gaaggatcag ggggtgggca actggtaact 900
gaagtcacca agaaagaaga ttcctgccag ctgggctact cggccggtcc ctgcatggga 960
atgaccagca ggtatttcta taatggtaca tccatggcct gtgagacttt ccagtacggc 1020
ggctgcatgg gcaacggtaa caacttcgtc acagaaaagg agtgtctgca gacctgccga 1080
actgtggcgg cctgcaatct ccccatagtc cggggcccct gccgagcctt catccagctc 1140
tgggcatttg atgctgtcaa ggggaagtgc gtcctcttcc cctacggggg ctgccagggc 1200
aacgggaaca agttctactc agagaaggag tgacagagat actgcggtgt ccctggtgat 1260
ggtgatgagg agctgctgcg cttctccaac tgacaactgg ccggtctgca agtcagagga 1320
tggccagtggt ctgtcccggt gtcctgtggc aggcagcgcc aagcaacctg ggtccaaata 1380
aaaactaaat tgtaaaactcc tgaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1440
aagg 1444
```

<210> 334

<211> 1030

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (59)

<223> n equals a,t,g, or c

<220>

<221> misc feature
 <222> (989)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (1006)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (1023)
 <223> n equals a,t,g, or c

<400> 334
 tagaattcgg agaagctgaa gcttagtggt ctaaaccggtg gttgggaagg gggaaggang 60
 acctcatgga cgtgcctggg ggtgtggctt ggcttccctt gattttggcc ggtggatgac 120
 gctgtcctga ccacaccac tccttgctgc agcctgkag tcttccactt tcgccttggt 180
 gcctgtcttc gccacactga gcacacctga gagcctcgtg ccagctgctg gtgcagcctc 240
 tcctgttgcc atcagtgccc agcacctgtg ctacagccat gtcactcctg gcgaccctgg 300
 ggctggagct ggacagggcc ctgctcccag ctagtgggct gggatggctc gtagactatg 360
 ggaaactccc cccggcccct gccccctgg ctccctatga ggtccttggg ggagccctgg 420
 agggcgggct tccagtgggg ggagagcccc tggcaggtga tggcttctct gactggatga 480
 ctgagcagtg tgatttcaca gctctcctcc ctctggagcc tcccytacc cccggcacc 540
 tcccccaacc tcccccaacc ccacctgacc tggaagctat ggcctccctc ctcaagaagg 600
 agctggaaca gatggaagac ttcttccctag atgccccgct cctcccacca ccctccccgc 660
 cgccactacc accaccacca ctaccaccag cccctccct cccctgtcc ctccctcct 720
 ttgacctccc ccagccccct gtcttgata ctctggactt gctggccatc tactgccgca 780
 acgaggccgg gcaggaggaa gtggggatgc cgctctgccc cccgccacag cagccccctc 840
 ctcttctcc acctcaacct tctgcctgg gccccctacc cacatcctgc caccaccgca 900
 ggggaccgca agcaaaagaa gagagaccag aacaagtcgg cggtytgag gtaccgccag 960
 cggaaggggg caggaggggt tgagggcynk gggaagggga agttgncagg gggttgggaa 1020
 gnaagggaa 1030

<210> 335
 <211> 2127
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc feature
 <222> (72)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (2098)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature

<222> (2114)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2117)

<223> n equals a,t,g, or c

<400> 335

```
ggatctgagg aaagggaggg cttttctgat ctctcccaat tagaggatta ggcaattggc 60
agcgagctgc gntaactctg ggcggggctg ggctccaggg ctggacagca cagtccctct 120
gaactgcaca gagacctcgc agccccgaga actgtcgccc tccacgatg tggctccgtg 180
cctttatcct ggccactctc tctgcttccg cggcttgggc agggcatccg tcctcgccac 240
ctgtggtgga caccgtgcat ggcaaagtgc tggggaagtt cgtcagctta gaaggatttg 300
cacagcctgt ggccattttc ctgggaatcc cttttgcaa gccgcctctt ggaccctga 360
ggtttactcc accgcagcct gcagaacctat ggagctttgt gaagaatgcc acctcgtacc 420
ctcctatgtg caccgaagat cccaaggcgg ggagttact ctcaagcta ttacaaacc 480
gaaaggagaa cattctctc aagctttctg aagactgtct ttacctcaat atttactc 540
ctgctgactt gaccaagaaa aacaggctgc cggatgaggt gtggatccac ggaggggggc 600
tgatggtggg tgcggcatca acctatgat ggctggccct tgctgcccac gaaaacgtgg 660
tggtggtgac cattcaatat cgctgggca tctggggatt cttcagcaca ggggatgaac 720
acagccgggg gaactggggt cacctggacc aggtggctgc cctgcgctgg gtccaggaca 780
acattgccag ctttgagggg aaccagggct ctgtgacct ctttgagag tcagcgggag 840
gagaaagtgt ctctgttctt gttttgtctc cattggccaa gaacctctt caccgggcca 900
tttctgagag tggcgtggcc ctcaactctg ttctggtgaa gaaaggatg gtcaagccct 960
tggctgagca aattgctatc actgctgggt gcaaaaccac cacctctgct gtcatggttc 1020
actgcctgcg acagaagacg gaagaggagc tcttgagag gacattgaaa atgaaattct 1080
tatctctgga cttacaggga gacccagag agagtcaacc ccttctgggc actgtgattg 1140
atgggatgct gctgctgaaa acacctgaag agcttcaagc tgaaaggaat ttccacactg 1200
tcccctacat ggtcggaatt aacaagcagg agtttggtg gttgattcca atgcagttga 1260
tgagctatcc actctccgaa gggcaactgg accagaagac agccatgtca ctctgtgga 1320
agtcctatcc ccttgtttgc attgctaagg aactgattcc agaagccact gagaaatact 1380
taggaggaac agacgacact gtcaaaaaga aagacctgtt cctggacttg atagcagatg 1440
tgatgtttgg tgtcccatct gtgattgtgg cccggaacca cagagatgct ggagcaccac 1500
cctacatgta tgagtctcag taccgtccaa gcttctcatc agacatgaaa cccaagacgg 1560
tgataggaga ccacggggat gagctcttct ccgtctttgg ggccccattt taaaagagg 1620
gtgcctcaga agaggagatc agacttagca agatggtgat gaaattctgg gccactttg 1680
ctcgcaatgg aaacccaat ggggaagggc tgccccactg gccagagtac aaccagaagg 1740
aagggtatct gcagattggt gccaacaccc aggcggccca gaagctgaag gacaaagaag 1800
tagctttctg gaccaacctc tttgccaaga aggcagtggg gaagccacc cagacagaac 1860
acatagagct gtgaatgaag atccagccgg ccttgaggag ctggaggagc aaagactggg 1920
gtcttttgcg aaagggattg caggttcaga aggcattcta ccatggctgg ggaattgtct 1980
ggtggtgggg ggcaggggac agaggccatg aaggagcaag ttttgtattt gtgacctcag 2040
ctttgggaat aaaggatctt ttgaaggcca aaaaaaaaaa aaaagggcgc ctttttangg 2100
gttcccaatt tacnaanggg tgcttggg 2127
```

<210> 336

<211> 847

<212> DNA

<213> Homo sapiens

<220>
<221> misc feature
<222> (291)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (334)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (829)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (847)
<223> n equals a,t,g, or c

<400> 336
ccgccatgcc gttcctggag ctggacacga atttgcccgc caaccgagtg cccgcggggc 60
tgagagaaacg actctgcgcc gccgctgcct ccatacctggg caaacctgcg gacggaccac 120
tccccactcc ttctctcacg ccaagctctg actttccgtg ctccacgata ccgcggctcc 180
ccctccgcac gtctttccct tgtcgccttc ccagtcatag acccgggcgt gaccttcagg 240
gaccgcggcc cgtatcggga tccctgcccc gcgaacactg cgcgtttcgg ntttcgcgcg 300
ctcgggtccc gtccccagag gtagcccgcc cggntccaac ttcgggcaaa attttcatagt 360
ccccctgcgg accgcgtgaa cgtgacggta cggccggggc tggccatggc gctgagcggg 420
tccaccgagc cctgcgcgca gctgtccatc tcctccatcg gcgtagtggg caccgccgag 480
gacaaccgca gccacagcgc ccacttcttt gagtttctca ccaaggagct agccctgggc 540
caggaccgga tacttatccg ctttttcccc ttggagtcct ggcagattgg caagataggg 600
acggtcatag cttttttatg attgggcacg gagggatcca gggcatctgt gaactggctg 660
cttcttccag agagatctct tggcagagtg agggcctgga gataaccagc tttggattat 720
cccgcatgca acattcctgt gatcacataa tcctcttctt catcctcata tgaaataaat 780
gaagagagct tcctcattca aaaaaaaaaa aaaaaaaccc cgggggggnc cggtaaccca 840
ttggccn 847

<210> 337
<211> 702
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (21)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (150)
<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (669)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (679)

<223> n equals a,t,g, or c

<400> 337

```
ttttccgccc cgctgtatcc natggttccc tgtgccttcc ggctagaact gctcacagtc 60
ccgectcttc cgctgcgtgc cggaccatgg cgcaggggca gcgcaagttt caggcgcaca 120
aacccgcaaa gagtaagacg gcagcggcan cctctgaaaa gaatcggggc ccaagaaaag 180
gcggtcgtgt tatcgctccc argaaggcgc gcgtcgtgca gcagcaaaag ctcaagaaga 240
acctagaagt cggaatccgg aagaagatcg aacatgacgt ggtgatgaaa gccagcagca 300
gcctgccc aaagctggca ctgctgaagg cccagccaa gaagaaagg gcagctgccg 360
ccacctctc caagacacct tctgaggac gctggccca gtgcaggcca acatcccacc 420
ccctacctcc atatgggacc ttgcaagtca tcccacaggc tgcactgtca ggaagaggac 480
cctgtcccc agcactgggc ttcacctaga acttcagtgg gggccaagg tgctgagaac 540
ccagcaatga ccaggaagat acagtcacta acttcactg tccccgtgcc cttcccagg 600
tcttgccctc acagggtttaa ccagaacaa taaacctggc tttgtcaama aaaaaaaaaa 660
agggccggnc gtttttagang atccagctta cgtaccgtgc tt 702
```

<210> 338

<211> 875

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (791)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (813)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (830)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (861)

<223> n equals a,t,g, or c

<400> 338

taagatagca aaccagttcg ttttaagtaa gctaacttgt tcattagtat ctgtggctta 60
aaatggcaaa aaagaaaata tccttgagtt tgtaatctag ttacagaagt aaggcataca 120
cacacacaaa gataacagta cctagagaga gagtgtgtgt gagtgtgctg gtctctgtgt 180
gtgcacgtgc acgctcatgg ccaaagtgtg gcactctaca taaaggaggc aggagttcct 240
ataggctatt taatgtaaga gaaactatct ttctcctgtt ccagctgtat cagatactcg 300
ttccgcaaca cagaaatgac tcagaatctc agacaaaatg tattatttgt tcaattttaa 360
ttttgctact acattcataa ctcttaaatt gttaggtgtt ttcatttaca tcaaagttat 420
ctcacaaaag agaaggcagg aaacgttttg tgagtgccta ttctatgtca aacactgtgt 480
tggcaccata ttttacaagt ttttttcctc ttctcacagt gatcttgtga gttagttact 540
tatattttta ttagaactca ttattctggg taccctccaa tgagaattag agaggttaaa 600
taccttttcc tagattccca cagcaggaag gtgggcatag ctgttttgtc tgacaccaga 660
acccatctca ccacactgct ttacagtctt cctgaaggga cattttgagg tggggggggg 720
ccttcaaagc tcagaggact ggggttkgaa tgggtttaat ttttgcaagg gatccatgtc 780
catgccaggg ngtttacaat tctttaactt ccntcccaaa ttcgtgtgtg ccattaggga 840
catttgggtt acatccgggc nggggagggg caggg 875

<210> 339

<211> 1448

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1427)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1432)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1440)

<223> n equals a,t,g, or c

<400> 339

cagcgccact agcctcattg tgcccaggag ttctccaaac ccgcgctgcg gagtgagtga 60
ccaagttccg gccagttcga cctcgaggat ccagaggtgg agacgggtact acctcccagc 120
tctgttttcc atccccctca ggtccttcct cgggaggcgg cgaaggcggg ccaccctgcg 180
cgtgatccct yatgccggc ccctgccccct ccctccgggt ggaacttccc cctcaccgcc 240
agacttaagc tgaggatcgt tggatctctg gcggggtgca gaactgagcc caggccacag 300
taccctattc acgctctgtg cttgtgccaa gggggcaatg gcggcttcct gtgttctact 360
gcacactggg cagaagatgc ctctgattgg tctgggtacc tggaagagtg agcctggtca 420
ggtaaaaagca gctgttaagt atgcccttag cgtaggctac cgccacattg attgtgctgc 480
tatctacggc aatgagcctg agattgggga ggccctgaag gaggacgtgg gaccaggcaa 540
ggcgggtgct cgggaggagc tgtttgtgac atccaagctg tggaacacca agcaccacc 600
cgaggatgtg gagcctgccc tccggaagac tctggctgac ctccagctgg agtatctgga 660
cctgtacctg atgactggc cttatgcctt tgagcgggga gacaaccct tccccagaa 720
tgctgatggg actatatgct acgactccac ccactacaag gagacttggg aggtctctga 780
ggcactgggt gctaaggggc tgggtgcaggc gctgggcctg tocaacttca acagtcggca 840

```

gattgatgac atactcagtg tggcctccgt gcgtccagct gtcttgacagg tggaaatgcc 900
cccatacttg gctcaaaatg agctaattgc ccactgccaa gcacgtggcc tggaggtaac 960
tgcttatagc cctttgggct cctctgatcg tgcatggcgt gatcctgatg agcctgtcct 1020
gctggaggaa ccagtagtcc tggcattggc tgaaaagtat ggccgatctc cagctcagat 1080
cttgctcagg tggcaggtcc agcggaaagt gatctgcac cccaaaagta tcactccttc 1140
tcgaatcctt cagaacatca aggtgtttga cttcaccttt agcccagaag agatgaagca 1200
gctaaatgcc ctgaacaaaa attggagata tattgtgcct atgcttacgg tggatgggaa 1260
gagagtccca agggatgcag ggcacccctt gtaccccttt aatgaccctg actgagacca 1320
cagcttcttg gcctcccttc cagctctgca gctaattgagg tcctgccaca acggaaagag 1380
ggagttaata aagccattgg agcatccaaa aaaaaaaaaa aaaaaanayc tngsggccgn 1440
caagggaa 1448

```

<210> 340

<211> 843

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (812)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (822)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (829)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (838)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (841)

<223> n equals a,t,g, or c

<400> 340

```

aattcggcac gagctggcct gagaagccaa ctcagactca gccaacagag attgttgatt 60
tgccctcttaa gcaagagatt cattgcagct cagcatggct cagaccagct catacttcat 120
gctgatctcc tgccctgatgt ttctgtctca gagccaaggc caagaggccc agacagagtt 180
gccccaggcc cggatcagct gcccagaagg caccaatgcc tategctcct actgctacta 240
ctttaatgaa gaccgtgaga cctgggttga tgcagatctc tattgccaga acatgaattc 300
gggcaacctg gtgtctgtgc tcaccaggc cgagggtgcc tttgtggcct cactgattaa 360
ggagagtggc actgatgact tcaatgtctg gattggcctc catgaccca aaaagaaccg 420
ccgctggcac tggagcagtg ggtccctggt ctctacaag tcctggggca ttggagcccc 480

```

```
aagcagtgtt aatcctggct actgtgtgag cctgacctca agcacaggat tccagaaatg 540
gaaggatgtg ccttgtgaag acaagttctc ctttgtctgc aagttcaaaa actagaggca 600
gctggaaaaat acatgtctag aactgatcca gcaattacaa cggagtcaaa aattaaaccg 660
gaccatctct ccaactcaac tcaacctgga cactctcttc tctgctgagt ttgccttggt 720
aatcttcaat agttttacct accccagtct ttggaaccyt aaataataaa aataaacatg 780
tttccactaa aaaaaaaaaa aaaaaaaamt cncagggggg gnccggtanc caattcgnc 840
naa 843
```

<210> 341

<211> 1293

<212> DNA

<213> Homo sapiens

<400> 341

```
gtgctcataa ctgttaatga aagcagattc aaagcaacac caccaccact gaagtatttt 60
tagttatata agattggaac taccaagcat gtggctcctg gtcagtgtaa ttctaattctc 120
acggatatcc tctgttgggg gagaagcaac attttgtgat tttccaaaaa taaaccatgg 180
aattctatat gatgaagaaa aatataagcc attttccag gttcctacag gggaagtttt 240
ctattactcc tgtgaatata attttgtgtc tccttcaaaa tcattttgga ctgcgataac 300
atgcacagaa gaaggatggt caccaacacc aaagtgtctc agactgtgtt tctttccttt 360
tgtggaaaaat ggtcattctg aatcttcagg acaaacacat ctggaagggtg atactgtgtgca 420
aattatttgc aacacaggat acagacttca aaacaatgag aacaacattt catgtgtaga 480
acggggctgg tccaccctc ccaaatgcag gtccactgac acttcctgtg tgaatccgcc 540
cacagtacaa aatgctyata tastgtcgag acagatgagt aaatatccat ctggtgagag 600
agtacgttat saatgtagga gcccttatga aatgtttggg gatgaagaag tgatgtgttt 660
aaatggaaac tggacrgaac cacctcaatg caaagattct acrggaaaat gtgggcccc 720
tccacctatt gacaatgggg acattacttc attcccgttg tcagtatatg ctccagcttc 780
atcagttgag taccaatgcc agaacttgta tcaacttgag ggtaacaagc gaataacatg 840
tagaaatgga caatggtcag aaccaccaa atgcttacat ccgtgtgtaa tatcccgaga 900
aattatggaa aattataaca tagcattaag gtggacagcc aaacagaagc tttattygag 960
aacaggtgaa tcagytgaa ttgtgtgtaa acggggatat cgtctttcat cacgttctca 1020
cacattgcga acaacatggt gggatgggaa actggagtat ccaacttggt caaaaagata 1080
gaatcaatca taaartgcac acctttatc agaactttag tattaatat gttctyaatt 1140
tcatttttwa tgtattgttt tactcctttt tattcatagc taaaattttg gattaatttg 1200
tgaaaatgta attataagct gagaccggtg gctctcttct taaaagcacc atattaaatc 1260
ctggaaaact aaaaaaaaaa aaaaaaaact cgc 1293
```

<210> 342

<211> 1273

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (6)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (483)

<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1247)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1262)
<223> n equals a,t,g, or c

<400> 342
gcccangcgg ccgcgaggcg ccgccgccgc cgccgcagcc gccggagccg caatgcctaa 60
aggaggaaga aaggagggcc acaaaggccg ggcgaggcag tatacaagcc ctgaggagat 120
cgacgcgcag ctgcaggctg agaagcagaa ggccagggaa gaagaggagc aaaaagaagg 180
tggagatggg gctgcagggtg accccaacaaa ggagaagaaa tctctagact cagatgagag 240
tgaggatgaa gaagatgact accagcaaaa gcgcaaaggc gttgaagggc tcatcgacat 300
cgagaacccc aaccgggtgg cacagacaac caaaaaggctc acacaactgg atctggacgg 360
gccaaaggag ctttcgagga gagaacgaga agagattgag aagcagaagg caaaagagcg 420
ttacatgaaa atgcacttgg ccgggaagac agagcaagcc aaggctgacc tggcccggt 480
ggncatcatc cggaacacag gggaggaggc tgcccggaa aaggaagagg aaaggaaagc 540
aaaagacgat gccacattgt caggaaaacg aatgcagtca ctctccctga ataagtaact 600
gcgacccgtg ggaggagatg ccggggacct gggccgcgct gccaggacct ctgctgtgtc 660
tcgcccaccc tgtgccctgg cgccgctgca acagcccctc atggccagga gcccccatg 720
gcctggggcc tcctcttcat cttggcacag aaattgtttg ggggatgggg ggggggactg 780
ggggaggggt agctgctatc tttgagacag aaagrkyag aagagctttc atttgtctgg 840
tagatagata gcatgtaagg ggggtggtgt cccaggaggc agctgctgac aggtttgcta 900
cacacagccc cggactgtgt tgccctgggtg ctcatcaga gaggggctat catctgggag 960
cctgtgcccc tgggtcctcg agggtcattg cttgtccctg gtcagtcctg tctgactgac 1020
ctcagggcct caccctctctg cccttcctg cccggttcct actcacctgg ctagggccag 1080
tgccatttt cagccctacc cattgatcat ttcaagaaac ctctgtttac tgtgtggcac 1140
ccaggcaaaa catgctccac aaattcaact tgtatatttg gcagattaaa cttgacatta 1200
tcgtaaaaaa aaaaaaaaaa atttgggggg gggcccgta cccattnggg cccttagggg 1260
gnggtttaa tta 1273

<210> 343
<211> 1793
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (1251)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1267)
<223> n equals a,t,g, or c

<400> 343

```
gcccacgcgt cgcgccacgc gtccggcatg gacctcagtc ttctctgggt acttctgccc 60
ctagtcacca tggcctgggg ccagtatggc gattatggat acccatacca gcagtatcat 120
gactacagcg atgatgggtg ggtgaatttg aaccggcaag gcttcagcta ccagtgtccc 180
caggggcagg tgatagtggc cgtgaggagc atcttcagca agaaggaagg ttctgacaga 240
caatggaact acgcctgcat gcccacacca cagagcctcg gggaacccac ggagtgtctg 300
tggaaggaga tcaacagggc tggcatggaa tggtagcaga cgtgctccaa caatgggctg 360
gtggcaggat tccagagccg ctacttcgag tcagtgtctg atcgggagtg gcagttttac 420
tgtgtctcgt acagcaagag gtgcccatac tcctgctggc taacaacaga atatccaggt 480
cactatggtg aggaatgga catgatttcc tacaattatg attactatat ccgaggagca 540
acaaccactt tctctgcagt ggaaagggat cgccagtgga agttcataat gtgccggatg 600
actgaatacg actgtgaatt tgcaaatgtt tagatttgcc acataccaaa tctgggtgaa 660
aggaaagggg ccaggggaca ggagggtgtc cacatatgtt aacatcagtt ggatctccta 720
tagaagtttc tgctgtcttc ttctcttctc cctgagctgg taactgcaat gccaaacttc 780
tgggccttct tgactagtat cacacttcta ataaaatcca caattaaacc atgtttctca 840
cttttcacat gtttcatagc aactgcttta tatgactgat gatggcttcc ttgcacacca 900
catatacagt gcgcatgctt acagccgggc ttctggagca ccagctgcag cctggctact 960
gctttttact gcagaatgaa ctgcaagttc agcatagtgg aggggagagg cagaactgga 1020
ggagaggtgc agtgaagggt ctctacagct aagcctgttt gaatgatacg taggttcccc 1080
acaaaaagca ggctttctgc cctgagggac atcttccac tcccctgctc cacatgagcc 1140
atgcatgctt agcaatccaa gtgcagagct ctttgctcca ggagttagga gactgggagg 1200
tgaaatgggg aaatggaagg gtttgagggc agagctgaaa acagggttgg naagggattt 1260
cctgaantta raagacaaac gtttagcatac ccagtaagga aaatgagtgc aggggccagg 1320
ggaaccctgt aggatcactc tcaaatgaga ttaaaaacaa ggaagcagag aatggtcaga 1380
gaatgggatt cagattggga acttggtggg atgagagtga ccagggtgaa ctgggaagtg 1440
gaaaaaggag tttgagtcac tggcacctag aagcctgccc acgattccta ggaaggctgg 1500
cagacaccct ggaaccctgg ggagctactg gcaaaactct ctggattggg cctgattttt 1560
ttggtgggaa aggctgccct ggggatcaac ttctctctg tgtgtggctc aggagtctt 1620
ctgcagagat ggcgtatctt ttctctctcc tgtgatgtcc tgctcccaac catttgact 1680
cttcattaca aaagaaataa aaatattaac gttcamwawg ctgaaaaaaaa aaaaaaaaaa 1740
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 1793
```

```
<210> 344
<211> 1672
<212> DNA
<213> Homo sapiens
```

```
<220>
<221> misc feature
<222> (95)
<223> n equals a,t,g, or c
```

```
<220>
<221> misc feature
<222> (1667)
<223> n equals a,t,g, or c
```

```
<220>
<221> misc feature
<222> (1668)
<223> n equals a,t,g, or c
```

<400> 344

```

ctgcgacgcg ctccggccca ggtggcgccc ggcgcgccag cctccccgcc tgctggcggg 60
agaaaccatc tcctctggcg ggggtagggg cggantggcg tccgaccaca ccggaagagg 120
aagtctaagc gccggaagtg gtgggcattc tgggtaacga gctatttact tcctgcgggt 180
gcacaggctg tggtcgtcta tctccctgtt gttcttccca tcggcgaaga tggccctgga 240
gacggtgccg aaggacctgc ggcattctgc ggcctgtttg ctgtgttcgc tggccaagac 300
tatagaccag tttgaatatg atggttgtga caatttgtat gcatactac aaatgaaggg 360
taaccgagag atggtatatg actgcactag ctcttccttt gatggaatca ttgcgatgat 420
gagtcagag gacagctggg tctccaagtg gcagcgagtc agtaacttta agccagggtg 480
atatgcgggt tcagtcactg gtcgcctgcc ccaaggaatc gtgcgggagc tgaaaagtcg 540
aggagtggcc tacaaatcca gagacacagc tataaagacc tagcaagatg caaggctgcc 600
agcatctttg ctctccacct cctgcctctg cttatttctt gttctggaac taaatgaaca 660
gaacttcaaa tacttcctac cctccaattc agactcagct gactgttgag agagcagcac 720
atcattttat cattttatct tctttggact acaggtgggg tgggagggat ttgggttgg 780
ggattaacag atggaattga ggagagagta ggatgctgat ttccctacc gtggcccagg 840
tctgtgcctt ccccatgcc aaggactctag gtcaaattgc aataaatatg aacctcgaga 900
aagttctgaa ggccatgaca cctgccttgc ctccctcttc cattctctta ggcacagtaa 960
tagcttattt gccctataag aaccttccca gagcagcaga ggcccttcta ctccctcttg 1020
actgtctcag cctctgggat tgcagccttt gtagtgtgct tccttgcttc ctatcagagg 1080
gtgctgatcc agaggctcag taaccccatc aacttggtgg ccctgggtgc tcacacttgt 1140
atccttctgc cctcgagacc tggcacagca gtatcccttg aagaaatcct gaggctttgt 1200
agagtgtctc ttgaccatgt ttaataattc ttccctcccc tgcttgctta ttttcttctc 1260
ttcacggctc ttccctatac ttaggccagt ctcaagcact cactggagac ccttgggcct 1320
tggcgacca ttgagtccta gtctcccttg tttgtgcccc tgtaggagggt aggtcctttt 1380
ctctccggcc tagtagggga ccttgggtaa catcccat ttcggccaag gtgagttgtt 1440
ttaggataaa aaaatttacc acaaattctc atttaattt ccacagaaat cctgttcgta 1500
tccccatttt gatttcccta agttccttgt tctccctcta aaaagagaat gattgcaccc 1560
tgctgtttaa cctcaggatt gttgtgattg tagaaacgaa gctatgtgaa aattatataa 1620
gtattataaa ggtgaaatac ttttgctctc aaaaaaaaa aaaaaanntt aa 1672

```

<210> 345

<211> 2109

<212> DNA

<213> Homo sapiens

<400> 345

```

agcactagct ttgacatcca cggtagctg cagggaagca tcacacacca gccagcatgt 60
gagcagaggg aggcagttgg ggttgaactt cggaactagg ccgggtctyc tgacagatca 120
caagacaccc cagaggatct tcagcagtc tacttcccat tctctataga gctttgaagc 180
ttggaaccct tccagggtaa acattttctc ttgtgctgct yaggacaty ggggcctagc 240
tcctgggttc ctgtctccaa gaagcaatga ccttaaactc tgagccatac tctgtcctca 300
ccagcggtc ccatgttttt ctgtgtcagg ttattaagta cctagtcctt gttttctgtc 360
tctstcctaa gctacctctc tgggtccaca gaagacttgg tagtatagtg agaatggcta 420
tacgtgagta caaacrtgga ttttccaagg gcttgggaam tgattcttga gcccagaaga 480
gccamgcctg ctttgaggctc ttttggagt gtagtgcagc cctgggaaat ttggggagtc 540
agcaggccag tgtgaagcwa ttggtcctag gagtatatga gcttgctgtt tctttgatgg 600
aaaatacatg cttctcttgt atactcagaa gtgactaagg gcaataactc attaatagcc 660
atctatccaa cttcttctact gagtgtgta ttccatgggg ttaccttttt cagattattg 720
agttgctctg taagcactaa aactttttta tcatttttaa gaaacttttt agattgtatt 780
acaaatttgc cttaacagta attagatgtt gaataaatt ttaacatttt attaatgact 840
tgggtcatca gttaatacca gtactaaaac catacgaatt attggtttat tccagaaaat 900

```



```

acagtatttg ttctattttt aggtagacaa tcatttggga tcagagtaca ttagcatagt 960
aatgctcagt cagacctgtt caagtagtag agcttggaga atgcatgaa atacttata 1020
aattaatttg attgcatgaa ctaagcaatt ttactaatga aaagggtgta tatgtgcaag 1080
tcactttttt aaaaaccaag aaaaaacttt aatagaggaa atcttattca ttaattttatt 1140
tttctgagta aaaaaacgaa acccaaactct catttttatt caactgttaa acattttgat 1200
ctgttgaccc ataggatcag gatttgggaa ccactttact aggaaagagc agatcagtac 1260
catttgtata aaaccggcct cattatgtaa gaaagaaaat gttacgtgtt ttcttcttta 1320
gcttggttgt gggcacttct acagcaagga ccatatcata ttcattcttg catccctggc 1380
acatgcatga gacataagta cttaataaat gcagttgaat ggataatgat tagtgttatt 1440
tatggattag aaaaagcatg tttctattta agtaagctgt aaaaagtatt attgaatatt 1500
tactgtaaat atatgttcac ataaaaaaat aacttggagg gtctttgtgt ccctggcata 1560
ttatcatctt catggaaaga atccactgtg gtttctgtag agtgattgga aaaatggatt 1620
atthttgagga ttgaagaaag tgttctttct gcgttgtcac tttgttcaac agtaaaactt 1680
tattctcagt gttcctactc tgcattgttt acatttttga cagttttttt tratcaccta 1740
caatctgtaa agaattgata tattcttttc agcatctcag tttgaaaaga catgcagtta 1800
aacttgacct tttgataatc gctcttacag gtcattgtct gttctaacag caaattgtaa 1860
acattgtcct catagatatt gtggctctca gtcactactt tgcctatgg tatttattga 1920
atgttcatcat actaatggtg cacagggtgt ttttctata aatcttctga ctgtcctgta 1980
attcattctt aagctttaac ttgaagggtat cgtaattgcc ggcatattgat gtttagcaat 2040
aaaagaataa atgtgtacca gcattttatg tttaaaaaaa aaaaaaaaaa actcgagact 2100
agtctctct 2109

```

<210> 346

<211> 1714

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (21)

<223> n equals a,t,g, or c

<400> 346

```

caggcggagg cgctcgcgga nctttggggc accacagaga tgcggggttg cctgcaatga 60
gatttcattc tctacattta aaggacatcc tttctgagct gctgtgaata aatttggaat 120
ggtactgtat attttcatct aatggagaac tagctgtact ttgaataagg attgctgcac 180
tggacgactt tagaacatcc ctcacaatgt cgtcaaccg gagccagaac cccacaggcc 240
tgaagcagat tggcctggac cagatctggg acgacctcag agccggcatc cagcagggtg 300
acacacggca gagcatggcc aagtccagat atatggagct ctacactcat gtttataact 360
actgtactag tgttcaccag tcaaaccaag cacgaggagc tggagttcct ccttctaagt 420
cgaaaaaggg gcagacacct ggaggagctc agtttgttgg cctggaatta tataaacgac 480
ttaaggaatt tttgaagaat tacttgacaa atcttcttaa ggatggagaa gatttgatgg 540
atgagagtgt actgaaattc tacactcaac aatgggaaga ttatcgattt tcaagcaaag 600
tgctgaatgg aatttgtgcc tacctcaata gacattgggt tcgccgtgaa tgtgacgaag 660
gacgaaaagg aatatatgaa atctattcgc ttgcattggg gacttggaga gactgtctgt 720
tcaggccact gaataaacag gtaacaaatg ctgttttaaa gctgattgaa aaggaaagga 780
atggtgaaac catcaatata agattgatta gtggagttgt acagtcttac gtggaattgt 840
ggctgaatga agattgtgca ttgcaaagg gccctacgtt aacagtgtat aaagaatcct 900
ttgaatctca atttttggct gacacagaga gcttttatac cagagagagt actgaattct 960
tgcaagcaga cccagttact gaatatatga aaaaggcaga ggctcgtctg cttgaggaac 1020
aacgaagagt tcagggtttac cttcatgaaa gcacacaaga tgaattagca aggaaatgtg 1080

```

```

aacaagtcct cattgaaaaa cacttggaata ttttccacac agaatttcag aattttattgg 1140
atgctgacaa aaatgaagat ttgggacgca tgtataatct tgtatctaga atccaggatg 1200
gcctaggaga attgaaaaaa ctgttgagga cacacattca taatcagggt cttgcagcca 1260
ttgaaaagtg tggagaagct gctttaaatg accccaaaat gtatgtacag acagtgcctg 1320
atgttcataa aaaatacaat gccctggtaa tgtctgcatt caacaatgac gctggccttg 1380
tggtgctct tgataaggct tgtggtcgct tcataaaca caacgcggtt accaagatgg 1440
cccaatcatc cagtaaattc cctgagttgc tggtcgata ctgtgactcc ttgttgaaga 1500
aaagttccaa gaaccagag gaggcagaac tagaagacac actcaatcaa gtgatgggtg 1560
tcttcaagta catagaagac aaagacgtat ttcagaagtt ctatgcgaag atgctcgcca 1620
agaggctcgt ccaccagaac agtgcaagtg acgatgccga agccagcatg atctccaagt 1680
taaagcaagc ttgcgggttc gactacacct ctaa 1714

```

<210> 347

<211> 1672

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1667)

<223> n equals a,t,g, or c

<400> 347

```

cgatgtctta ttgtgatgag tctcgactgt caaatcttct tcggaggatc acccggaar 60
acgacmgaga cygaagattg gyyactgtaa agcagttgaa agaatttatt cagcaaccag 120
aaaataagct ggtactagtt aaacaattgg atatcttggc tgctgyacat gatgtgctta 180
atgaaagtag caaattgctt caggagttga gacaggaggg agcttgctgt ctyggccttc 240
tttgtgcttc tctgagctat gaggtgaga agatcttcaa gtggattttt agcaaattta 300
gctcatctgc aaaagatgaa gttaaactcc tctacttatg tgccacctac aaagcactag 360
agactgtagg agaaaagaaa gccttttcat ctgtaatgca gcttgtaatg accagcctgc 420
agtcaattct tgaaaatgtg gataaccag aattgctttg caaatgtgtt aagtgcattc 480
ttttggtggc tcgatgttac cctcatattt tcagcrctaa ttttagggat acagttgata 540
tattagttgg atggcataga gatcactc agaaacctc gctcacgcag caggtatctg 600
ggtggttgca gagtttgag ccattttggg tagctgatct tgcatctcct acgactcttc 660
ttggtcagtt tctagaagac atggaagcat atgctgagga cctcagccat gtggcctctg 720
gggaatcagt ggatgaagac gtccctcctc catcagtgtc atyaccaaag ctggctgcgc 780
ttctccgggt atttagtact gtggtgagga gcaytgggga amgcytcagc ccaattcggg 840
ycctccaatt actgaggcat acgtaacaga tgttctgtac agagtaatga gatgtgtgac 900
ggctgcaaac caggtgtttt tttctgaggc tgtgttgaca gctgctaata agygtgttg 960
tgttttgctc ggcagcttg atcctagcat gactatacat tgtgacatgg tcattacata 1020
tgattagac caactggaga attgccagac ttgtggtacc gattatatca tctcagctct 1080
gaatttactc acgctgattg ttgaacagat aaatacgaaa ctgccatcat cattttaga 1140
aaaactgttt ataccatcat cttaaactact attcttgcgt tatcataaag aaaaagaggt 1200
tgttgtctga gcccatgctg tttatcaagc aatgctcagc ttgaagaata ttcctgtttt 1260
ggagactgcc tataagttaa tattgggaga aatgacttgt gccctaaaca acctcctgca 1320
cagctctgaa ctctctgagg cctgttctga aataaacat gaggtcttta agaactcatg 1380
gttcaatgta gacaatgcaa aatttgtagt taaatttgac ctgagtgccc tgactacaay 1440
tggaatgcc aaaaactcga gtctttaatt gtaatgactt tgttttatcc acagttaagc 1500
cttttctcat tacatattta tgtatttcac tgtcatgtca acatgtctgc agaactcactg 1560
tatgtaacaa acagccatat ttaagacatg cctggataaa taaaatttgt aggaatgttt 1620
tcttgccatt ataaaaaaaa aaaaaaaaaa aaaaaaagg ggggccnccc tt 1672

```

<210> 348
 <211> 1483
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc feature
 <222> (19)
 <223> n equals a,t,g, or c

<400> 348
 ccgcgggcgc ggcgcgggna ggcgaccatg cgcggcgcgcg gggcgatcct gcggccggcg 60
 gcgcgtgggtg cccggggacct gaaccgcgcg cgggacatct cctcctggct ggcccagtg 120
 ttccctagaa ccccagccag gtccgtgggtg gccctgaaga ccccatcaa ggtggagctg 180
 gtggcaggga aaacctacag gtggtgtgtg tgtggccgca gcaagaagca gcccttctgt 240
 gacggctccc acttcttcca acgcactggc ctatctccac tcaagttcaa ggcccaagag 300
 accgcgatgg tggcactctg tacctgcaag gccactcaga ggccccgta ctgcgatggc 360
 acccacagga gtgagcgct gcagaaggca gaagtgggt cccactctg agggggctgc 420
 tgctgtccag ccacaggtgg ccttggctcc aggcctctga caggcacccc cttctgtggg 480
 aaaggaaaca ggtgtgagc ccaagagact ctggtaccca ctgctggctc atgaaggaag 540
 aattattcct tataacctaa agtctccag tctggggcag gcgggagtg ggcctgggtc 600
 aatgtttgct gatggggaag atggcaaaaa caagcctgcc caaccagact ggtagtcctg 660
 cagtcactgc tatgaggccc atgtgctgcc tctgtctcca gattttaacc tctctgtggg 720
 ctgggggac ctgaccagcc acaggagagg gcagttcaga ttcattctgt atggggctcc 780
 caagccaggc taaacctcaga gatgagaggc acccttccct tcttccctcc accccaaaga 840
 actacaggct ccagaaagta tgcagcattt attacaaagc caagagatac agatgtccca 900
 gggcaaagga gggtagagtc acaggacctc agacacagga caaggtgcaa acacagacaa 960
 gcccatcagg gggctcccaa cccacacac ctacgctatg atggaatctc gagtctcgac 1020
 tcccgactcc tctcagatct atgcacactt gaggaatct cgggtgggcag cgacctgcca 1080
 gggctctgtcc ctaaggagggt ggtccgctga cctctcaagg ggtgggggtg gggtcagagc 1140
 ttacaggttt ctgtcttctt gtgcttttag atgcagttgc tctgtcctga ccaggtgacc 1200
 gggcctcagc tgggggtgga ggggcaattg gaaggctgtt tgcctctggc aaagtctggg 1260
 atctgtgctt gtgtgaggtt aaccaccccc cacttccact ctaggcccca ggtgagactc 1320
 caccaccagt cctgctagtg agggttcccc ggtgagggta aggttggtg ggggtgcagc 1380
 cttcacaatg ctaaagcctt agccctcctc caagagctga gacctctcag ggcctgaatc 1440
 ttcttttcca caagataaat gatgcaaagg ccacacacac agg 1483

<210> 349
 <211> 1842
 <212> DNA
 <213> Homo sapiens

<400> 349
 aatatwtgta ttttttgatc ctwtgaacct gaaaagggtc agaaggatgc ccagacatca 60
 gcctccttct ttcaccctt accccaaaga gaaagagttt gaaactcgag accataaaga 120
 tattcttttag tggaggctgg atgtgcatta gcctggatcc tcagttctca aatgtgtgtg 180
 gcagccagga tgactagatc ctgggtttcc atccttgaga ttctgaagta tgaagtctga 240
 gggaaaccag agtctgtatt tttctaaact ccctggctgt tctgatcggc cagttttcgg 300
 aaacactgac ttaggtttca ggaagttgcc atgggaaaca aataatttga actttggaac 360
 agggttggaa ttcaaccacg caggaagcct actattttaa tccttggtt cagggttagtg 420

```

acattttaatg ccatctagct agcaattgcg accttaattt aactttccag tcttagctga 480
ggctgagaaa gctaaagttt ggttttgaca ggttttccaa aagtaaagat gctacttccc 540
actgtatggg ggagattgaa ctttccccgt ctccccgtct ctgcctccca ctccataccc 600
cgccaaggaa aggcatgtac aaaaattatg caattcagtg ttccaagtct ctgtgtaacc 660
agctcagtggt tttgggtggaa aaaacatttt aagttttact gataatttga ggtagatgg 720
gaggatgaat tgtcacatct atccacactg tcaaacaggt tgggtgtgggt tcattggcat 780
tctttgcaat actgcttaat tgctgatacc atatgaatga aacatgggct gtgattactg 840
caatcactgt gctatcggca gatgatgctt tggaagatgc agaagcaata ataaagtact 900
tgactaccta ctggtgtaat ctcaatgcaa gcccacactt tcttatccaa ctttttcata 960
gtaagtgcga agactgagcc agattggcca attaaaaacg aaaacctgac taggttctgt 1020
agagccaatt agacttgaaa tacgtttgtg tttctagaat cacagctcaa gcattctgtt 1080
tatcgctcac tctcccttgt acagccttat tttgttggtg ctttgcatth tgatattgct 1140
gtgagccttg catgacatca tgaggccgga tgaaacttct cagtccagca gtttccagtc 1200
ctaacaaatg ctcccacctg aatttgata tgactgcatt tgtgggtgtg tgtgtgtttt 1260
cagcaaattc cagatttgtt tccttttggc ctcttgcaaa gtctccagaa gaaaatttgc 1320
caatctttcc tactttctat ttttatgatg acaatcaaag ccggcctgag aaacactatt 1380
tgtgactttt taaacgatta gtgatgtcct taaaatgtgg tctgccaatc tgtacaaaat 1440
ggctctatth ttgtgaagag ggacataaga taaaatgatg ttatacatca atatgtatat 1500
atgtatttct atatagactt ggagaatact gccaaaacat ttatgacaag ctgtatcact 1560
gccttcgtth atattttttt aactgtgata atccccacag gcacattaac tgttgcaact 1620
ttgaatgtcc aaaatttata ttttagaaat aataaaaaaga aagatactta catgttccca 1680
aaacaatggt gtggtgaatg tgtgagaaaa actaacttga taggggtctac caatacaaaa 1740
tgtattacga atgccctgt tcatgttttt gttttaaaac gtgtaaatga agatctttat 1800
atttcaataa atgatatata atttaaagtt aaaaaaaaaa ga 1842

```

<210> 350

<211> 3008

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (9)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (59)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (65)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1307)

<223> n equals a,t,g, or c

<400> 350

```

acagcatcnt taggaaacct aaggtagaga atccccccag agagcctggc aagggaatnt 60
cgagncacga agagttttctc caacccaagg aggccagaca gagggacgtg gtcactctct 120
gaaaagttca acttgagaga caaaatgcag tggacctccc tcctgctgct ggcagggtc 180
ttctccctct cccaggccca gtatgaagat gaccttcatt ggtggttcca ctacctccgc 240
agccagcagt ccacctacta cgatccctat gacctttacc cgtatgagac ctacgagcct 300
tacccttatg ggggtgatga agggccagcc tacacctacg gctctccatc ccctccagat 360
ccccgcgact gccccagga atgcgactgc ccaccaact tccccacggc catgtactgt 420
gacaatcgca acctcaagta cctgcccttc gttccctccc gcatgaagta tgtgtacttc 480
cagaacaacc agatcacctc catccaggaa ggcgtctttg acaatgccac agggctgtc 540
tggttgctc tccacggcaa ccagatcacc agtgataagg tgggcaggaa ggtcttctcc 600
aagctgaggc acctggagag gctgtacctg gaccacaaca acctgacctg gatgccgggt 660
ccctgcctc gatccctgag agagctccat ctgaccaca accagatctc acgggtcccc 720
aacaatgtc tggaggggct ggagaacctc acggccttgt acctccaaca caatgagatc 780
caggaagtgg gcagtccat gaggggcctc cggctactga tcttgctgga cctgagttat 840
aaccacctc ggaaggtgcc tgatgggtg cctcagctc ttgagcagct gtacatggag 900
cacaacaatg tctacaccgt ccccgatag tacttccggg gggcgcccaa gctgctgtat 960
gtgcggctgt cccacaacag tctaaccaac aatggcctgg cctccaacac cttcaattcc 1020
agcagcctc ttgagctaga cctctcctac aaccagctgc agaagatccc ccagtcacac 1080
accaacctg agaacctcta cctccaaggc aataggatca atgagttctc catcagcagc 1140
ttctgcaccg tgggtggacgt cgtgaacttc tccaagctgc aggtgctgcg cctggaccgg 1200
aacgagatca agcgagcgc catgcctgcc gacgcgccc tctgcctgcg ccttgccagc 1260
ctcatcgaga tctgagcagc cctggcaccg ggtactgggc ggaaranccc ccgtggcatt 1320
tggttgatg gtttggtttg gcttttgctg gaaggtccag gatggaccat gtgacagaag 1380
tccacgggca ccctctgtag tcttctttcc tgtaggtggg gttagggggg gcgatcaggg 1440
acaggcagcc ttctgctgag gacataggca gaagctcact cttttccagg gacagaagtg 1500
gtggtagatg gaaggatccc tggatgttcc aaccataa atctcacggc tcttaagt 1560
ttcccaatga tctgaggtca tggaaacttc aaagtggcat gggcaatagt atataacccat 1620
acttttctaa caatccctgg ctgtctgtga gcagcacttg acagctctcc ctctgtgctg 1680
ggctggtcgt gcagtactc tgggtctcca tttgttgctt ctcaaaatat acctcttgcc 1740
cagctgcctc ttctgaaatc cacttcaccc actccacttt cctccacaga tgcctcttct 1800
gtgccttaag cagagtcagg agacccaag gcatgtgagc atctgcccag caacctgtgg 1860
agacaacca cactgtgtct gagggtgaaa ggacaccagg agtcacttct atacctccct 1920
aacctacccc ctggaaagcc accagattgg aggtcaccag catgatgata atattcatga 1980
cctgatgtgg gaggagacag ccaacctcag gcttagatca atgtatagg ctatatattt 2040
gcagctgggt agctctttga aggtggataa gacttcagaa gaggaaaggc cagactttgc 2100
ttaccatcag catctgcaat gggccaaaca cacctcaaat tggctgagtt gagaaagcag 2160
ccccagtagt tccattcttg cccagcactt tctgcattcc aaacagcatc ctacctgggt 2220
ttttatccac aaaggtagcg gccacatggg ttttaaagta tgagaaacac agtttgcct 2280
ctccttttat ccaagcagga agattctata tcctgatggg agagacagac tccaggcagc 2340
cctggacttg ctagcccaaa gaaggaggat gtggttaatc tgtttcacct ggtttgcct 2400
aaggccatag ttaaaaagta ccagctctgg ctgggggtccg tgaagcccag gccaggcagc 2460
caaactctgc ctgtgctggg catacaaccc tctgctttca catctctgag ctatatcctc 2520
attagtgaag gtggtttttg ctttatagtt tggctgggga gcacttaatt cttcccattt 2580
caaaaggtaa tgttgcttg ggcttaaccc acctgccctt tgggcaagg tgggacaaag 2640
ccatctgggc agtcaggggc aaggactgtt ggaggagagt tagcccaagt atagctctgc 2700
ccagatgcca tcacatccct gatactgtgt atgctttgaa gcaccttccc tgagaaggga 2760
agaggggatc tttggactas gttcttggt ccagacctgg aatccacaaa agccaaacca 2820
gctcatttga acaaaggagc tccgatgtga gggcaaggct gccccctgcc ccagggtctc 2880
tcagaatgca tctgcatgtg aacaccatca tgcctttata aaggatcctt attacaggaa 2940
aagcatgagt ggtggctaac ctgaccaata aagttatttt atgattgcaw mwaaaaaaaa 3000
aaaaaaaaa 3008

```

<210> 351
<211> 2756
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (1597)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (2540)
<223> n equals a,t,g, or c

<400> 351
gtcggctgtg acggccttca gcgagggcag cgtcatcgcc tactactggt ctgagttcag 60
catcccgag cacctggtgg aggaggccga gcgcgtcatg gccgaggagc gcgtagtcat 120
gctgcccccg cgggcgcgct ccctgaagtc ctttgtggtc acctcagtgg tggctttccc 180
cacggactcc aaaacagtac agaggacca ggacaacagc tgcagctttg gcctgcacgc 240
ccgcggtgtg gagctgatgc gcttcaccac gcccggttc cctgacagcc cctaccccg 300
tcatgccccg tgccagtggg ccctgcgggg ggacgccgac tcagtgtga gcctcacctt 360
ccgcagcttt gaccttgct cctgcgacga gcgcggcagc gacctggtga cgggtgtaca 420
caccctgagc cccatggagc cccacgcctt ggtgcagttg tgtggcacct accctccctc 480
ctacaacctg accttcact cctcccagaa cgtcctgctc atcacactga taaccaacac 540
tgagcggcgg catcccggt ttgaggccac cttcttccag ctgcctagga tgagcagctg 600
tggaggccgc ttacgtaaag ccagggggac attcaacagc ccctactacc caggccacta 660
cccaccaaac attgaytgca catggaacat tgagggtgcc aacaaccagc atgtgaaggt 720
gcgcttcaaa ttcttctacc tgctggagcc cggcggtgct gcgggcacct gccccaaagg 780
ctacgtggag atcaaygggg agaaatactg cggagagagg tcccagttcg tcgtcaccag 840
caacagcaac aagatcacag ttcgcttcca ctacagatcag tcctacaccg acaccggctt 900
cttagctgaa tacctctcct acgactccag tgacctatgc ccggggcagt tcacgtgccg 960
cacggggcgg tgtatccgga aggagctgcg ctgtgatggc tggggccgact gcaccgacca 1020
cagcgatgag ctcaactgca gttgcgacgc cggccaccag ttcacgtgca agaacaagtt 1080
ctgcaagccc ctcttctggg tctgcgacag tgtgaacgac tgcrgagaca acagcgacga 1140
gcaggggtgc agttgtccgg cccagacctt cagggtgttc aatgggaagt gcctctcgaa 1200
aagccagcag tgcaatggga aggacgactg tggggacggg tccgacgagg cctcctgccc 1260
caaggtgaac gtcgtcactt gtaccaaaca cacctaccgc tgcctcaatg ggctctgctt 1320
gagcaagggc aaccctgagt gtgacgggaa ggaggactgt agcgacggct cagatgagaa 1380
ggactgcgac tgtgggctgc ggtcattcac gagacaggct cgtgttgttg ggggcacgga 1440
tgcggatgag ggcgagtggc cctggcaggc aagcctgcat gctctgggcc agggcacatc 1500
tkgcggtgct tccctcatct ctcccaactg gctggtctct gccgcacact gctacatcga 1560
tgacagagga ttcagggtact cagacccac gcagtgncag gccttcttgg gcttgacga 1620
ccagagccag cgcagccycc tgggggtgcag gagcgagggc tcaagcgcat catctcccac 1680
cccttcttca atgacttcac cttcgactat gacatcgcg tgctggagct ggagaaaccg 1740
gcagagtaca gctccatggt gcggcccatc tgcttgccgg acgcctccca tgtcttccct 1800
gccggcaagg ccatctgggt cacgggctgg ggacacaccc agtatggagg cactggcgcg 1860
ctgatcctgc aaaaggtgga gatccgcgtc atcaaccaga ccacctgcga gaacctcctg 1920
ccgcagcaga tcacgcccg catgatgtgc gtgggcttcc tcagcggcgg cgtggactcc 1980
tgccagggtg attccggggg acccctgtcc agcgtggagg cggatggggc gatcttccag 2040

```

gccgggtgtgg  tgagctgggg  agacggctgc  gctcagagga  acaagccagg  cgtgtacaca  2100
aggctccctc  tgtttcggga  ctggatcaaa  gagaacactg  gggatatagg  gccggggcca  2160
cccaaattgtg  tacacctgcg  gggccacca  tcgtccacc  cagtgtgcac  gcctgcaggc  2220
tgagactgg  accgtgact  gcaccagcgc  cccagaaca  tacactgtga  actcaatctc  2280
cagggctcca  aatctgccta  gaaaacctct  cgcttcctca  gcctccaaag  tggagctggg  2340
aggtagaagg  ggaggacact  ggtggttcta  ctgaccacac  tgggggcaaa  ggtttgaaga  2400
cacagcctcc  cccgccagcc  ccaagctggg  ccgaggcgcg  tttgtgyata  tctgcctccc  2460
ctgtctstaa  ggagcagcgg  gaacggagct  tcggrgcctc  ctcaagtgaag  gtggtggggc  2520
tgccggatct  gggctgtggn  gcccttgggc  cagctcttg  aggaagccca  ggctcggagg  2580
accctggaag  acagacgggt  ctgagactga  aattgtttta  ccagctccca  ggggtggactt  2640
cagtgtgtgt  atttgtgtaa  atgagtaaaa  cattttattt  ctttttaaaa  aaaaaaaaaa  2700
aaaaaaaaaa  aaaaaaaaaa  aaaaaaaaaa  aaaaaaaaaa  aaaaaaaaaa  aaaaaa      2756

```

<210> 352

<211> 1645

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (97)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1574)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1596)

<223> n equals a,t,g, or c

<400> 352

```

cgcgctccgcc  cacgcgtccg  cccacgcgtc  cggaaaaata  ttctttgaat  aaccttgacg  60
tactatatatt  caattttctt  ataaatttaa  gtgcatntta  actcataatt  gtacactata  120
atataagcct  aagtttttat  tcataagttt  tattgaagtt  ctgatcggtc  cccttcagaa  180
atttttttat  attattcttc  aagttacttt  cttatttata  ttgtatgtgc  attttatcca  240
ttaatgtttc  atactttctg  agagtataat  acccttttaa  aagatatttg  gtataccaat  300
acttttcctg  gattgaaaac  tttttttaa  ctttttaaaa  tttggggcac  tctgtatgca  360
tatgtttggt  cttgttaaag  aggaagaaa  gatgtgtgtt  atactgtacc  tgtgaatgtt  420
gatacagtta  caatttattt  gacaaggttg  taattctaga  atatgcttaa  taaaatgaaa  480
actggccatg  actacagcca  gaactgttat  gagattaaca  tttctattga  gaagcttttg  540
agtaaagtac  tgtatttggt  catgaagatg  actgagatgg  taacacttcg  tgtagcttaa  600
ggaaaatggc  agaatttcgt  aaatgctgtt  gtgcagatgt  gttttccctg  aatgctttcg  660
tattagtggt  gaccagtttc  tcacagaatt  tgcgaagcctg  aaggccaaga  ggaagtcact  720
gttaaaggac  tctgtgccat  cttacaacct  tggatgaatt  atcctgccaa  cgtgaaaacc  780
tcatgttcaa  agaacacttc  ctttagccg  atgtaactgc  tggttttgtt  tttcatatgt  840
gtttttctta  cactcatttg  aatgctttca  agcatttgta  aacttaaaaa  atgtataaag  900
ggcaaaaagt  ctgaaccctt  gttttctgaa  atctaatacag  ttatgtatgg  tttctgaagg  960
gtaattttat  tttggaatag  gtaaaggaaa  cctgttttgt  ttgtttttcc  tgagggctag  1020

```

```
atgcattttt tttctcacac tcttaatgac ttttaacatt tatactgagc atccatagat 1080
atattcctag aagtatgaga agaattattc ttattgacca ttaatgtcat gttcatttta 1140
atgtaataata attgagatga aatgttctct gggttggaaca gatactctct ttttttctt 1200
gcaatcttta agaatacata gatctaaaat tcattagctt gaccctcaa agtaactttt 1260
aagtaaagat taaagctttt cttctcagtg aatatatctg ctagaaggaa atagctggga 1320
agaatttaat gatcagggaa attcattatt tctatatgtg gaaactttt gcttcgaata 1380
ttgtatcttt ttaaactctaa atgttcatat ttttcctgaa gaaaccactg tgtaaaaatc 1440
aaattttaat tttgaatgga ataatttcaa agaactatga agatgatttg aagctctaata 1500
ttatatagtc acctataaaa tgttctttat atgtgttcat aagtaaattt tatattgatt 1560
aagttaaact tttngaattg gatttgagga gcagtnaaaa tgaaagctat atctattctr 1620
aaaccttrtt taagaccatt tgggg 1645
```

<210> 353

<211> 1637

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (738)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (771)

<223> n equals a,t,g, or c

<400> 353

```
gcccgtgag gacgcagcgt cactgacctg gggagtcgcg attcgtgccg gccggctcctg 60
gttctccggt cccgccgctc ccgcagcagc catgtcgttc ttcccgagc tttacttta 120
cgtggacaat ggctacttgg agggactggg gcgcggcctg aaggccgggg tgctcagcca 180
ggccgactac ctcaacctgg tgcagtgcga gacgctagag gacttgaaac tgcacttgca 240
gagcactgat tatggtaact tcctggccaa cgaggcatca cctctgacgg tgctagtcac 300
cgatgaccgg ctcaaggaga agatgggtgg ggagttccgc cacatgagga accatgccta 360
tgagccactc gccagcttcc tagacttcat tacttacagt tacatgatcg acaacgtgat 420
cctgctcatc acaggcacgc tgcaccagcg ctccatcgct gagctcgtgc ccaagtgcc 480
cccactaggc agcttcgagc agatggaggc cgtgaacatt gctcagacac ctgctgagct 540
ctacaatgcc attctggtgg acacgcctct tgcggtcttt ttccaggact gcatttcaga 600
gcaggacctt gacgagatga acatcgagat catccgcaac accctctaca aggcctacct 660
ggagtccttc tacaagttct gcaccctact gggcgggact acggtgatg ccatgtgccc 720
catcctggag tttascaangc agaccgtgcc aagctcttcc cactctgtg nccgctctac 780
cctgagggcc tggcgcastg gctcgggctg acgactatga acaggtcaag aacgtggccg 840
attactaccc ggagtacaag ctgctcttcg aggggtgcagg tagcaaccct ggagacaaga 900
cgctggagga ccgattcttt gagcacgagg taaagctgaa caagttggcc ttctgaacc 960
agttccactt tgggtgtctc tatgccttcg tgaagctcaa ggagcaggag tgctgcgaaca 1020
tcgtgtggat cgctgaatgt atcgcccagc gccaccgcgc caaatcgac aactacatcc 1080
ctatcttcta gcgtcctggc ccaaggctct caattgact ctttgtgtgt gtgtgtgtgt 1140
gtgtgcgcgt gtgtgtgcgt gtgtgtgtat gggtctgtg acaagcctgt ggctcacctg 1200
cctgtccggg gtgtagtacg gtgtcctagc tgggtcccag ttctcctgac cctcttagag 1260
actgttctta ggcctgaaaa ggggctgggc accccccccc accaaggatg gacgaagacc 1320
ccctccagag caaggaggcc ccctcagccc tgtggttaca gccgctgatg tatctaagaa 1380
```



```

gcatgtcact ttcattgttcc tccctaactc cctgacctga gaaccctggg gcctgggggc 1440
agtttgagcc tcctctccct tctgtgggtc gctcccagag ccatggccca tgggaaggac 1500
agagtgtgtg tgtccttggg gcctgggggg atgttgctcc tcagctccct ccctcagccc 1560
tgccccctctg agacaataaa actgccctct ctaaggccaa aaaaaaaaaa aaaaaaaaaa 1620
aaaaaaaaaa aaaaaaa                                     1637

```

<210> 354

<211> 1119

<212> DNA

<213> Homo sapiens

<400> 354

```

cggcacgagc cgcgcgcccc cgaggctccg ggggtctcggg cttccgcctt cttgctgccc 60
tcgttcttgc crgggcccgc gttagtccct gctggccacc ccactgcgac catgttcggt 120
ccctgcgggg agtcggcccc cgaccttgcc ggcttcaccc tcctaattgcc agcagtatct 180
gttggaatg ttggccagct tgcaatggat ctgattattt ctacactgaa tatgtctaag 240
attggttact tctataccga ttgtcttgtg ccaatgggtg gaaacaatcc atatgcgacc 300
acagaaggaa attcaacaga acttagcata aatgctgaag tgtattcatt gccttcaaga 360
aagctggtgg ctctacagtt aagatccatt tttattaagt ataaatcaaa gccattctgt 420
gaaaaactgc tttcctgggt gaaaagcagt ggctgtgcca gagtcatgtt tctttcragc 480
agtcattcat atcagcgtaa tgatctgcag cttcgtagta ctcccttccg gtacctactt 540
acaccttcca tgcaaaaaag tgttcaaaat aaaataaaga gccttaactg ggaagaaatg 600
gaaaaaagcc ggtgcattcc tgaaatagat gattccgagt tttgtatccg cattccggga 660
ggaggtatca caaaaacact ctatgatgaa agctgttcta aagaaatcca aatggcagtt 720
ctgctgaaat ttgtttcaga aggggacaac atcccagatg cattaggtct tgttgagtat 780
cttaatgagt ggcttcagat actcaaacca cttagcgatg accccacagt atctgcctca 840
cgggtgaaaa taccaagttc ttggagatta ctctttggca gtggtcttcc ccctgcactt 900
ttctgatcta atttctgtt tataccttat acccaaaaca cttactacca acacagctgt 960
taaacattct atacaaaaaa attgtatgat ctggtattag gaaattactt tcacagtaaa 1020
tatcaaagaa aaaagattaa rgggtctctt gccatgctt tcatcatatg caccaaattg 1080
aaattttgta cctcggccgc gaccacgcta agccgaatt                                     1119

```

<210> 355

<211> 738

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (654)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (689)

<223> n equals a,t,g, or c

<400> 355

```

ggcacgaggg acttgctgct ggtgcccgc gccgccactg gaaagctgaa atccttcgcc 60
cggaaattca tcaatttgaa tgaattcaca acctatggca gcgargaaag caccaaaccg 120
gcctccgtcc gggccctgct gtttgamatc tccttcctca tgctgtgcca tgtggccag 180

```

```

acctatggtt caraggtgat tctgtccgag tcgcgcacag gagctgaggt gcccttcttc 240
gagacctgga tgcagacctg catgcctgag gagggcaaga tcctgaaccc tgaccacccc 300
tgcttcgcc ccgactccac caaagtggag tccctgggtg ccctgctcaa caactcctcg 360
gagatgaagc tagtgagat gaagtggcat gaggcctgtc tcagcatctc agccgccatc 420
ttggaaatcc tcaatgcctg ggagaatggg gtccctggcct tcgagtccat ccagaaaatc 480
actgataaca tcaaaggga ggtatgcagt ctggcgggtg gtgctgtggc ttggcttgtg 540
gcccacgtcc ggatgctggg gctggatgag cgtgagaagt cgctgcagat gatccgccag 600
ctggcagggc cactgtttag ygagaacacc ctgcagttct acaatgagag ggtngtgatc 660
atgaactcga tcctgggagc gcatgtgtnc cgacgtgctg cagcagacag ccacgcagga 720
ttcaagtttc cctccaac 738

```

<210> 356

<211> 1966

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (56)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (788)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1753)

<223> n equals a,t,g, or c

<400> 356

```

gaactagtct cgagtttttt ctgtctagct ccgaccggct gaggcggcgc ggcagnggag 60
ggacggcagt ctgcrcggc tactgcagca ctgggggtgc agttgttggc ccgaccaga 120
acgcttcagt tctgctctgc aaggatata aataactgat tgggtgtgcc gtttaataaa 180
agaatatgga aactgaacag ccagaagaaa cttccctaa cactgaaacc aatggtgaat 240
ttggtaaacg ccctgcagaa gatatggaag aggaacaagc atttaaaaga tctagaaaca 300
ctgatgagat ggttgaatta cgcattctgc ttcagagcaa gaatgctggg gcagtgattg 360
gaaaaggagg caagaatatt aaggctctcc gtacagacta caatgccagt gtttcagtcc 420
cagacagcag tggccccgag cgcattattga gtatcagtgc tgatattgaa acaattggag 480
aaattctgaa gaaaatcacc cctacccttg aagagggcct gcagttgcca tcaccactg 540
caaccagcca gctcccgtc gaatctgatg ctgtggaatg cttaaattac caacactata 600
aaggaaagtga ctttgactgc gagttgagggc tgttgattca tcagagtcta gcaggaggaa 660
ttattggggc caaaggtgct aaaatcaaag aacttcgaga gaacactcaa accaccatca 720
agcttttcca ggaatgctgt cctcattcca ctagacagat tggtcttatt ggaggaaaac 780
ccgatagngt cgtagatgac ataaagatca tccttgatct tatactctgag tctcccatca 840
aaggacgtgc acagccttat gatcccaatt tttacgatga aacctatgat tatggtggtt 900
ttacaatgat gtttgatgac cgtcgcggac gccagtgagg atttcccatg cggggaagag 960
gtgggttttg cagaatgcct cctggtcggg gtgggcgtcc catgcctcca tctagaagag 1020
attatgatga tatgagccct cgtcaggagc cacctcccc tcctcccga cgaggcggc 1080
ggggtggtag cagagctcgg aatcttcctc ttctccacc accaccacct agagggggag 1140

```

```

acctcatggc ctatgacaga agagggagac ctggagaccg ttacgacggc atgggttggtt 1200
tcagtgtctga tgaaacttgg gactctgcaa tagatacatg gagcccatca gaatggcaga 1260
tggcttatga accacagggg ggctccggat atgattattc ctatgcaggg ggtcgtggct 1320
catatggtga tcttgggtgga cctattatta ctacacaagt aactattccc aaagatttgg 1380
ctggatctat tattggcaaa ggtggtcagc ggattaaaca aatccgtcat gagtcgggag 1440
cttcgatcaa aattgatgag cctttagaag gatccgaaga tcggatcatt accattacag 1500
gaacacagga ccagatacag aatgcacagt atttgctgca gaacagtgtg agcagtwma 1560
gwttagcttt gtgttagctt atacatacta aaacctttaa aaagcttttc ttctcaattg 1620
atttttttct tttagaagcc atggtgtctc aaccttttgg ggacctaaact tctaaacatt 1680
ctaatagttt gccttaattt ttcttctgct ttcttactaa aaacgargac attcaatact 1740
aatcttgccct ggnaggaaagc ctigaaccaa gcaaacttct gcatttctct ggtgaaaact 1800
gctgccaaaa ccacttgta aaaattgtac agagcctgta ggaaaatata gaagggtcca 1860
ttgggatgtt ggcctagttc tgtgtgggaa gacttagtgg attttgtttg ttttagata 1920
actaaatcgg ccaacaaatc accgttcttg cctatgggac cgggcc 1966

```

<210> 357

<211> 1562

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (16)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (18)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (260)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (262)

<223> n equals a,t,g, or c

<400> 357

```

taccgcgcg cctgcngnac cggtcgggaa ttcccgggc gaccacgcg tccgcatgaa 60
atggaccaat actggggaat tggcagtcctg gccagtggga taaatttgtt cacaacacagt 120
tttgagggcc cagttcttga tcacaggtat tatgcagggtg gatgctcccc gcattacatc 180
ctgaacacga ggtttaggaa gccctacaat gtggaaagct acacgccaca gacccaaggc 240
aaatacgaat tcatattaan anagtatgaa tcatactcag attttgaacg caatgtcaca 300
gagaaaatgg caagcaagtc tggtttcagt tttggtttta aaatacctgg aatatttgaa 360
cttggcatca gtagtcaaag tgatcgaggc aaacactata ttagggagaac caaacgattc 420
tctcatacta aaagcgtatt tctgcatgca cgctctgacc ttgaagtagc acattacaag 480
ctgaaaccca gaagcctcat gctccattac gagttccttc agagagttaa gcggctgccc 540
ctggagtaca gctacgggga atacagagat ctcttccgtg attttgggac ccactacatc 600

```

```

acagaggctg tgcttggggg catttatgaa tacaccctcg ttatgaacaa agaggccatg 660
gagagaggag attatactct taacaacgct catgcctgtg ccaaaaatga ttttaaaatt 720
ggtggtgcc a ttgaagaggt ctacgtcagt ctgggtgtgt ctgtaggcaa atgcagaggt 780
attctgaatg aaataaaaaga cagaaacaag agggacacca tgggtggagga cttggtgggc 840
ctggtacgag gaggggcaag tgagcacatc accaccctgg cataccagga gctgccgacg 900
gcggacctga tgcaggagtg gggagacgct gtgcagtaca acccagccat catcaaagtt 960
aaggtggagc ctctgtatga actagtgaca gccacagatt ttgcctattc cagcacagtg 1020
aggcagaaca tgaagcaggc actggaggag ttccagaagg aagttagtcc ctgccactgt 1080
gctccctgcc aaggaaatgg agtccctgtc ctgaaaggat cacgctgtga ctgcatctgt 1140
cctgttgat cccaaggcct agcctgtgag gtctcctatc ggaagaatac cccattgat 1200
gggaagtgga attgctggtc aaattggctc tcatgctctg gaagacgtaa gacaagacaa 1260
aggcagtgt acaatccacc tcctcaaaat gggggtagcc cctgttcagg ccctgcttca 1320
gaaacacttg actgctccta gcagatgata cagcagtggg ctacatacaa tgagagccct 1380
gagccctcaa gaactcaygc cagctcagcc ctacaccagt ttccacctgg agttcatgca 1440
agggcaaaaag gcagtgccat gcaagctgtt taaaataaag atgttacctt gtaaaatgca 1500
agttgattta aataaatact gagttaaagg ctttaaaaaa aaaaaaaaaa aaaggggggg 1560
cg 1562

```

<210> 358

<211> 1931

<212> DNA

<213> Homo sapiens

<400> 358

```

ctcgggagct cggactccta cgcatacccg ggaagggccg ccgccccgcc cgcggctgct 60
ggccccgggtg acacttcgcg ctgctataag agcagcggcc ctcggtgcct ccttcctgac 120
ctcgcaccca gctcggagcc cggagcgtgc ctcggcggcc tgcggtttt caccatggag 180
cagctgagct cagcaaacac ccgcttcgcc ttggacctgt tcctggcggt gagtgagaac 240
aatccggctg gaaacatctt catctctccc ttcagcattt catctgctat ggccatgggt 300
tttctgggga ccagaggtaa cacggcagca cagctgtcca agactttcca tttcaacacg 360
gttgaagagg ttcattcaag attccagagt ctgaatgctg atatcaacaa acgtggagcg 420
tcttatattc tgaaacttgc taatagatta tatggagaga aaacttacia tttccttcct 480
gagttcttgg tttcgactca gaaaacatat ggtgctgacc tggccagtgt ggattttcag 540
catgcctctg aagatgcaag gaagaccata aaccagtggg tcaaaggaca gacagaagga 600
aaaattccgg aactgttggc ttcgggcatg gttgataaca tgaccaaact tgtgctagta 660
aatgccatct atttcaaggg aaactggaag gataaattca tgaaagaagc cacgacgaat 720
gcaccattca gattgaataa gaaagacaga aaaactgtga aaatgatgta tcagaagaaa 780
aaatttgc atggctacat cgaggacctt aagtgccgtg tgctggaact gccttaccaa 840
ggcgaggagc tcagcatggt catcctgctg ccgatgaca ttgaggacga gtccacgggc 900
ctgaagaaga ttgaggaaaca gttgactttg gaaaagttgc atgagtggac taaacctgag 960
aatctcgatt tcattgaagt taatgtcagc ttgcccaggt tcaaactgga agagagttac 1020
actctcaact ccgacctcgc ccgcctaggt gtgcaggatc tctttaacag tagcaaggct 1080
gatctgtctg gcatgtcagg agccagagat atttttatat caaaaattgt ccacaagtca 1140
tttgtggaag tgaatgaaga gggaacagag gcggcagctg ccacagcagg catcgcaact 1200
ttctgcatgt tgatgcccga agaaaatttc actgccgacc atccattcct tttctttatt 1260
cggcataatt cctcaggtag catcctattc ttggggagat tttcttcccc ttagaagaaa 1320
gagactgtag caatacaaaa atcaagctta gtgctttatt acctgagttt ttaatagagc 1380
caatatgtct tatatcttta ccaataaaac cactgtccag aaacaagtct ttcattttct 1440
ttgtaagttt ggctctgttg gctgtttaca cccatgaatt ttggcatggg tatctatttt 1500
ycttttttac attgaaaaaa atccagtggg tgcttttgaa tgcatacagt aaagaagaag 1560
aaaagaatac atccgatgcg tagattcttg accatgtagt aatctataaa attgctatat 1620

```

```
cctcctgata gccatgggaa aacatgataa gatgggcatt tattttgcag ttagaatttt 1680
ggaagccaca aaatagacag acaccctgac tgttgaaggg aggtttaaaa acagatattc 1740
aattgaaatg taagagagca ccccaattga gagcccagggt tacgaagaca agcttgccctc 1800
gcctgacttt tctgtccctt gttctgcagg attagtattc tgttacagac ctctagtttt 1860
tagactcttc aattaaaggg ccaatggtta taacctgcaa aaaaaaaaaa aaaaaaaaaa 1920
aaaaaaaaaa a 1931
```

<210> 359

<211> 869

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (869)

<223> n equals a,t,g, or c

<400> 359

```
gctctggcgg gcataccagc gggccctggc cgctcacccg tggaaagtac aggttyctgac 60
agctgggccc tgtggttaga ggctggtaca aggttttggg tcggttcatc cctggcacca 120
ccaaagtgga tgcactgaag aagatgttgt tggatcaggg gggctttgcc ccgtgttttc 180
taggctgctt tctccactg gtaggggcac ttaatggact gtcagcccag gacaactggc 240
caaaactacag cgggattatc ctgatgccct tatcaccaac tactatctat ggctgctgt 300
gcakttagcc aacttctacc tgggtccccct tcattacagg ttggccggtg tccaatgtgt 360
tgctgttatac tggaaactcct acctgtcctg gaaggcacat cggtcttaag cctgcctcac 420
tccatcgttt ccaccttgca gtgatgcagc ttgacctgg aacggtcaga caacctcctc 480
aaagtgggca taccagtttc cacgggggtg ggttgccggt cagagcttaa gaggactagc 540
accctgcaat gcccctcttc actctaaaat gtacactgac tgctttagag cccttgataa 600
tagtcttatt cccaccacat actaggcact ccataaatat ctggtgaacc ttcacgacct 660
tatcaacttt acacccatat cccagcaaat gccactcatc cccactcttc atagacacat 720
ttgttactct aacctgcct aggttcttg tagctccagc tctttagaga ctcccggaac 780
cctttatatg gtgcctcagt aaatatgtta ttaaatatgt aatccggaaa aaaaaaaaaa 840
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 869
```

<210> 360

<211> 561

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (521)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (525)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (560)

<223> n equals a,t,g, or c

<400> 360

```
ggcacgagag actccagccg ccaggggagc gcgtgccgtt cttgcctctc tggcctgcgc 60
ctcctgagcc gagtagatat cccggagttc cgcgcggcgc cagcccttcc gccacggccg 120
tctctggaga gcagcagcca tggccctacg ctaccctatg gccgtgggccc tcaacaaggg 180
ccacaaagtg accaagaacg tgagcaagcc caggcacagc cgacgccgcg ggcgtctgac 240
caaacacacc aagttcgtgc gggacatgat tcgggaggtg tgtggctttg ccccgtacga 300
gcggcgccgc atggagttac tgaaggctct caaggacaaa cggggccctca aatttatcaa 360
gaaaagggtg gggacgcaca tccgcgccaa gaggaagcgg gaggagctga gcaacgtact 420
ggccgccatg aggaaagctg ctgccaaaga agactgagcc cctccccctg cctctccctg 480
aaataaagaa cagcttgaca gaaaaaaaaa aaaaaaaaaa ntcgnggggg ggcccgggtac 540
ccattcgccc tawagggggn g 561
```

<210> 361

<211> 1680

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (33)

<223> n equals a,t,g, or c

<400> 361

```
gagtttacac tgaccatggt ggaatgttaa ggngaacccc accccttctt acagatggtg 60
accagagacc tgctcttggg aacagccaga gtaagattgg aaccagact tgcaagccag 120
cgctgtttgc attaaaaggg tgggtgagtc aggaccctg gctcargagc cgyctctcct 180
aaaagagggt ttcaaggcca aatgggtttg tcaacggtgc tgtctccctt tcttgagat 240
gctcattagc ttatcaaaga ctgagaagtc ccgctgttac agaaataatt tagtttgctg 300
tattaactgc tcctgggcct ggagcagtat tcccacctta agattcccag catccctgtg 360
ctgtcccgcc tctcattcat gccgaaggcc caaccattg gctgtgttct gtttgaagat 420
ttggggggcg ctttctcttt cttccccagg gaattctcta gcagaggag gggaccacc 480
ccagtgagga agtagattgc tgcctctagc cagagacctg aactggggaa tttgaacatt 540
cctttacatt gttggagaaa tgaagccaaa gttattcaga tggttttccc aggctaaagg 600
aaagtcacct gcaagagatc ccggcactga tctggagcag ctgacagggt gggctccct 660
taccaaagag aagaaccact ctctggcgct ggggtgacct gctggctggg cctgtaagg 720
ttccatgttg ctgaggccat ggagattccc agagctgggc acaccgaccg ctctcagggc 780
ccgctgccct gggctggcaa caccattctg gccttggcct gcagaagctt tcagagtctt 840
cactggcagt agggggagat ggggagagga atgatctctg cccagcccct tcctttccaa 900
accatgcaat ggaagagccc agatgggtga agattgattt tgccttaact caagagaatt 960
cctgttctcc ttgtgctatg atttggacac aagattctgg atacctgaa cttagctgtg 1020
tactcctgta ccctaaacag tggatttgag ttccagcgtt tattcttttt tccttttttc 1080
agatcaccat ctaagttaca tcttttagctc aggtccatcc ttctcaagat ctcttcttta 1140
gccccccagc ccctggtgct gtctgtggtc aggtgacctt actcaggagc agatatctcc 1200
ttggccgccca tggagcctca tccatccaca cgtgcctgta gcattccaga gctcactgcc 1260
cttctagatg tgccttcccc cttggcttcc agcggcttgt gctcactctg tctgccaggt 1320
atgagaagaa cagtaagac cgccaccaca ctcacctcc ctcaaggccc tgtgccatag 1380
gggtggccac ccgacctgcc ccagaactt ttggatactg gaggcagttg cataggtctc 1440
cctctctggy caccaggact cagtccagcc caagactact ctgggcagct cccatcccag 1500
```

tctggggcca tttgcagact caggaaagga tttctacagt gttctataaa agccaaaaga 1560
gagagtgggt ttgggaagag tgagggtggt tggggagagg ggaccgatgt gcctcattgt 1620
ttagtggtga ttacaaatat gcttttctgg ataaagtttg gttgtttgct cttggaaaaa 1680

<210> 362

<211> 740

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (591)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (709)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (718)

<223> n equals a,t,g, or c

<400> 362

cagaaacaaa caaaaaggca gctgggttgt cactgatggg cagcatttga gcctgccaca 60
ctggcctgga agtttccctt ccagtctgga ttttgtctgc tccttccttc cccctcaccc 120
cgttacctct tcacctccca tctcatttca ctgtgtagct cagtctctcc cacgcacata 180
attggggaca gtggggggtc tcttaccagc ctctcagca acgcacgtcc atcaggcctg 240
gcctcagtgg ccagccacat tgatgtcaca ctggaattgt taccacagag agggcgaaga 300
gataggetat ctccccacct cccaccctac tccccactat attcccgttt tgaccacctc 360
agcccctcag ctgccccctc tcaacttggc caatcccagg caccaatcag acttcctcct 420
ccacctggag cccctagcat ttccttgtcc cctcttcccc aaaacctctg taaagggtac 480
gagagggacc ccctgcccag ccgcccgcc ctcagggcag tccgatctaa gaagcagaag 540
ctgggtggag gctggctggg cctctgtcca gtccccagat gggataaact ngccttttct 600
camatccctt cttgggtgcc tkgatctttc tytgcccccg gggccaggac ccactgtgct 660
gttttcttgt tcagttttgt ggggaaagga accaaggttt ttgccaagna accagtttct 720
tgaaaggggt tagggaaggg 740

<210> 363

<211> 1324

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (385)

<223> n equals a,t,g, or c

<400> 363

cgctgcctgg tgccgtggcc gcctcctcgg gcagcccccc gggctcggcg ctggcggcag 60

```

tggcgagcgg cggagacctc ttcccggggc agccgggtgc cgaactgatc gcgcagctgc 120
tgcgcgctga gccctaccct gcggcgggcg gacgcttcgg cgcagggggc ggcgcgggcg 180
gcgcgggtgct gggcatcgac aacgtgtgcg agctggcggc gcggtgctc ttcagcaccg 240
tggagtgggc gcgccacgcg cccttcttcc ccgagctgcc ggtggccgac caggtggcg 300
tgctgcgctt gagctggagc gagctcttcg tgctgaacgc ggcgcaggcg gcgctgcccc 360
tgcacacggc gccgctactg gccgncgcgg gcctccacgc cgcgcctatg gccgccgagc 420
gcgccgtggc tttcatggac caggtgcggc ccttccagga gcaggtggac aagctggggc 480
gcctgcaggt cgactcggcc gagtatggct gcctcaaggc catcgcgctc ttcacgcccc 540
acgcctgtgg cctctcagac ccggcccacg ttgagagcct gcaggagaag gcgcaggtgg 600
ccctcaccga gtatgtgcgg gcgcagtacc cgtcccagcc ccagcgcttc ggcgcgctgc 660
tgctgcggct ccccgccctg cgcgcgggtcc ctgcctccct catctcccag ctgttcttca 720
tgcgctgggt ggggaagacg ccatttgaga cactgatcag agacatgctg ctgtcgggga 780
gtaccttcaa ctggccctac ggctcggggc agtgaccatg acggggccac gtgtgctgtg 840
gccaggcctg cagacagacc tcaagggaca gggaatgctg aggcctcgag ggcctccccg 900
gggccaggga ctctggcttc tctcctcaga ctctattttt ttaaagactg tgaaatgttt 960
gtcttttctg ttttttaaat gatcatgaaa ccaaaaagag actgatcatc caggcctcag 1020
cctcatcctc ccaggacccc ctgtccagga tggagggtcc aatcctagga cagccttgtt 1080
cctcagcacc cctagcatga acttggtggg tgggtgggtt ggcttccctg gcatgatgga 1140
caaaggcctg gcgctggcca gaggggctgc tccagtgggc aggggtagct agcgtgtgcc 1200
aggcagatcc tctggacacg taacctatgt cagacactac atgatgactc aaggccaata 1260
ataaagacat ttcctacctg caaaaaaaaa aaaaaagggt ggccgctcgc gatctagaac 1320
tagt 1324

```

<210> 364

<211> 2853

<212> DNA

<213> Homo sapiens

<400> 364

```

cacctcgtct atggtgtatt tttgaaagac aattttttaa aggtagattt gggaaaaaaaa 60
tagaattgaa gatgggaaat tttgttttat taaaaagggt ctagaagatg tttcaaagac 120
aatattctta ttttaatacg ctgtagaagg taggtgtgga acctccatgc taccatgtgc 180
acaaacctaa ttatgctttg ggtcacttgt cagttcagta aatctgcctt cctcttctcc 240
caaatcatgt catcttttag ttgttcacct gcagctgctt taaatgaatt agtatctttc 300
agatagataa ccttacaagg agaatgtttg ttttgagcag ctgaccaaaa atatatcaaa 360
caggattatg gccaaaaagt cactcaaatt tctagagatt ctttataaag atgtatgttg 420
atgaaattgc ccctttataa gaaaaacaac agcaagtctt ttagtagaaa tttgaaagaa 480
gtgtttgcta ccattttgac ccattattcc cttacctatc agatgaattt gccattcact 540
ggatagaaac cattcttgga tttggtaaga ggtgagcaag acaaatcttg taccatactc 600
ttatgtacca gcacttctga tggagaagca gtgaagttca gaacgktctt cacatagtcc 660
agatactgkt tagagtcagg caaatcagca aagcctttgg tatggagatg mccccatgat 720
gctgcagttg taagtgggca tacatgttct atcattttga aggagaaaga aaaccgttct 780
cacatgtcgc aaatatgtga atcatactat attcccctaa agtaaaacca gtgacttagt 840
ggtttttgrt ttatttagaa gttggtttag acccttatga aacattattt acgagttggc 900
cttatcctta agggaaaagt tctaaatttt taaatttatt ttaattccc tagtctgagg 960
gaaatgtctt tattgtccat tacataaaaa tgttgactcc agtaatttat ttttctctat 1020
tttttccctc atgtatttac tccatttttc tctatttttt ccttccctga tggatttgca 1080
gaaatgttaa ccaattagct caacttttct ctacctttgt tgagtcttaa tcttttagaa 1140
gataggctta ccgtatatat atgaagcata atatatataa agaaaacaaa tctaggatgc 1200
ttgcatgaca taaagtattt gcctgcagtt ttcattaaaa actgcaagaa tatcatgctt 1260
gtctgcttct tagtaaatgt taagtctgra atggaagtga ggatgtaact ctactgaata 1320

```



```

atcaaagatc atcttagatt tggcttgatc tgtgtttatt gcttctatta atgtaaatca 1380
actctgtgcc aaatcctcct ccacaaacca tttattgtct tagttctagt ggtatcaatg 1440
aagatagtta cagtatatga attctaagtc ctgaggaaga aattttatgg ggtttgtaa 1500
gtttcacatt cgtgaaagag gaaattagta gagtattcag actttgatat ttggctgtta 1560
atgggatgca tatcaaattt ttaaaagaag gcttggccta aggagtttat tggtagaggt 1620
gcagatgatt ttaaggcatt aaaggattat agagttatgt catttagact gtttctaata 1680
actgagacca tctaacattt ttcttttgga gtctcatttt tatttgatga atattttcag 1740
gcatataggc tactgttcat tgtatttata tatatattag aatttactaa gtactttaac 1800
aagtaaaaat ctgaatatga aagaaaatat cagatttgca ctttaaatga gcttaattgc 1860
ttgaagttgt gcctgaaata tcgaattgcc tcctattggg tgtggctttg ttgaaataaa 1920
tttgtaattg ttgctgtttg aagatatcag tacagctgtt cacagaaata tattccagc 1980
atgtcacttt tccattaaag cactaagttt tctttgaatg ttccattgtt ccgataagta 2040
ttttactttt ttctcagtac atcagagaga gcgtgatccc cctacagctg tcacttccaa 2100
atgttcctgt agcataaatg gtgttacaga cactgaggtg cactccttgt ttctgagcag 2160
agttgtcata ctggtttcct ggtctctagg gcaactggga tgtactttga aatcaccgaa 2220
caggcttgca attaagatca ataaggctgc agcaccattt caatttactt tccatcttac 2280
ccagtagttt ttgtgttttt aaattcgttt ggggtggtat gtttgcagtc ttaagcacac 2340
atttgaaaat taattatagc tgtactaccg gatgtttttc cttggggatg atggccttgt 2400
tcctttttta attctgatgc ttgaattcta ttttctagtg atttttcaca tctcccttta 2460
agtttttgct gcagcaattt gagagagtac ttttgattaa atgattctga tggtaggcac 2520
caatctacaa ctatgtcatt aactgaagat acatgtttta atcttggttg gaataagctt 2580
acctactttc tccttggtta agcgtttact taacaaaata ataccgaga atgtaaggctc 2640
tctaagtcac tactaacaaa gagcaaaaat aatatctgca gtattgtttt tcccattgat 2700
tttaagtcag tttagagtac aaactgtata ttagaatttg cctgtaaaat gaattctaaa 2760
aagcagatgt aaagtctctc ctgaaaatgt tggcatagta aataaaaaata aagttcataa 2820
ttataaaaaa aaaaaaaaaa aaaaaaatta ctg 2853

```

<210> 365

<211> 1837

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (3)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (136)

<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (749)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1816)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1829)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1832)
<223> n equals a,t,g, or c

<400> 365

```
nnnttttttt tttttcacgt gtgtggtcaa gatgctrgag ctcggttat atttcggacc 60
acatgaaggt gcacagccag ggtcctcacc atgtctgtga gctctgcaac aaagggtacat 120
gccgagggct gccggnaggg ccaggggcag aggggtggcg cctggccaga cgccttgcca 180
cggatacggg ttaaggggtgc tgtagccaag agctcgtggc gtctagattc ctacaagagg 240
tcaagggagc agcgggggga cacctgaatg aacatcatta gactctaaga agtcctgggt 300
ggaagagatg atctgccaga gaggttgaac ctctgtgtaa tgtgtgggga aagcgggagt 360
ggaacttgcc tgctctgggg aaggagtagt caagaaagcc agttccaggg gtcacaaggc 420
aaggtttccg ctgcgcagcc acaagggtctt gtctccagct cctggggcag gtggagtaca 480
cgggcccggc tttaccagca cgcaccctgc gcatccacgc ggtgaaggac cacgggctcc 540
aggcccccg cgtgaccgca tcctgtgcaa gctgtgcagc gtgcaactgca agaccctgc 600
ccagctggcc ggccacatgc agaccctctt gggggggggc gccccctgt cccgggagac 660
gccccccagc cacagcccac ctgctgaggg ggacccccgc acccaccagg tactggtag 720
gtttgtccaa tggcggcggc agcggcagng gcggcagcgg cagcagcggc agcagtagca 780
gccccccca cagctgtggg ctccctctcg ggggcggagg ggggtgcctgt gagctctcag 840
ccacttccct cccaaccctg gtgagctcca agttgggtgc gggggagagg ggagaatgga 900
gtagagtccc ttggtacaag ctctctccc ccctcttttc ccaccaactc ctatttccct 960
accaaccaag gagcctccag aaggaaagga ggaagaaatg ttttcttagg ggaattcgct 1020
aggttttaac gatgtgtttc tcctgctcct cttctatcag acctgacccc acacaaacct 1080
gtcccctcgg ttgtgttgaa gtcccctgga cagtgggcag ggggtggcaga ggacacgagc 1140
agccactgcc cgtacccccct ctctctcttg taagcccatg ccctgtcttc ccagggactt 1200
gtgagcctct tccctcgacg gtcctcttct ctctctccag tcctctcccc ctgctgtctg 1260
cagccccctc ccggggaggtt ggtgctttct tttccttttt ttttttttcc agggggaggg 1320
aggagaggaa ggagggggat cagagctgtc ccaaagaggg aaagcgggtga ggtttgagga 1380
ggggcagaag cagggccggc aaagggtgta ctttcataag gtggtatggg gggttgggg 1440
caggccctga acatcgtcct acttgagaat ctgtcagggg aaaaagtcaa ggggagcagg 1500
aggaagagcc aggagggcca gaggcagaga agagatggag tcttaggggc cagggtgagc 1560
gaggggtcca gggcctagag gtgcttccctg ggggcggggg aatgcagcca gtgtccccct 1620
ccctcttcc accccagctc cagccctggt cttgtctttt catccctctt ccccaagaca 1680
gaagaagttg tggccctggc catgtcatcg tgttctgtg tccctgcac gtacccacc 1740
```

ctccaccctc tcccttttgcg cggaccccat tacaataaat tttaaataaa atcctgaaaa 1800
aaaaaaaaaa aaaacncgag gggggggcng gnaccca 1837

<210> 366

<211> 1823

<212> DNA

<213> Homo sapiens

<400> 366

ggcacgaggc aggrcgggyg ccaysgaagy cggaatccgc tgtgctcact gatccgcctc 60
caggggccacc gccatgtcga gccgcggtgg gaagaagaag tccaccaaga cgtccagggtc 120
tgccaaagca ggagtcattt ttcccgtggg cgggatgctg cgggtacatca agaaaggcca 180
ccccaaagtac aggattggag tgggggcacc cgtgtacatg gccgccgtcc tggaatacct 240
gacagcggag attctggagc tggctggcaa tgcagcgaga gacaacaaga agggacgggt 300
cacaccccg caccatcctgc tggctgtggc caatgatgaa gagctgaatc agctgctaaa 360
aggagtcacc atagccagtg ggggtgtgtt acccaacatc caccgccagt tgctagcgaa 420
gaagcgggga tccaaaggaa agttggaagc catcatcaca ccaccccgag ccaaaaaggc 480
caagtctcca tcccagaaga agcctgtatc taaaaaagca ggaggcaaga aaggggcccg 540
gaaatccaag aagcagggtg aagtcagtaa ggcagccagc gccgacagca caaccgaggg 600
cacacctgcc gacggcttca cagtctctc caccaagagc ctcttccttg gccagaagct 660
gaaccttatt cacagtgaag tcagtaattt agccggcttt gaggtggagg ccataatcaa 720
tcctaccaat gctgacattg accttaaaga tgacctagga aacacgctgg agaagaaagg 780
tggcaaggag tttgtggaag ctgtcctgga actccggaaa aagaacgggc ccttggaagt 840
agctggagct gctgtcagcg caggccatgg cctgcctgcc aagtttgtga tccactgtaa 900
tagtccagtt tgggggtgcag acaagtgtga agaacttctg gaaaagacag tgaaaaactg 960
cttggccctg gctgatgata agaagctgaa atccattgca tttccatcca tcggcagcgg 1020
caggaacggt tttccaaagc agacagcagc tcagctgatt ctgaaggcca tctccagtta 1080
cttcgtgtct acaatgtcct cttccatcaa aacggtgtac ttcgtgcttt ttgacagcga 1140
gagtataggc atctatgtgc aggaatggc caagctggac gccaaactagg ctgagcaatg 1200
acagaaccag ctgcaccatg taccacacct tcagttttaa agaaaaaaa aatccccttc 1260
actcctactg ggaggtggga cccctttcat tttcagtttt gctcatctag ggaaaataag 1320
gcttttggtt ccagtttaat tgtttttgac cttctaaaat gtttttatgt tagcactgat 1380
agttggcatt actgttgta agcactgtgt tccagaccgt gtctgactta gtgtaacctt 1440
ggagatttta tagttttatt ttaatgaaac cctgattgac gcacagcagt ggggagaaca 1500
gcgtctttta cctgtcaccg aagccaggaa gcccgcgttg taagcgtgtg ttgtgggtgt 1560
ttattgtaca tcctccagtg gcgttctttt tactctaatag ttcttttggt tccccccctc 1620
agaagaatca tgaatttgca acagacctaa tttttgggta ctttttgtct tattgatgga 1680
tttgaaaatg aaagatttaa taaggcaaag cagaatctgt tgtccttaat tatatttgca 1740
atttggaatt tgtgtgagtt gatttagtaa aatgttaaac cgttaaaaaa aaaaaaaaaa 1800
aaaaactcga gactagttct ctc 1823

<210> 367

<211> 898

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (17)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (25)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (30)

<223> n equals a,t,g, or c

<400> 367

```
aagggggggg aaaattnag acacnttttn aaggtacgcc cgcaggtacc ggtccggaat 60
tcccgggtcg acccacgcgt scgctcctgg ggccatgagg ctgtcactgc cactgctgct 120
gctgctgctg ggagcctggg ccatcccagg gggcctcggg gacagggcgc cactcacagc 180
cacagcccca caactggatg atgaggagat gtactcagcc cacatgcccg ctcacctgcg 240
ctgtgatgcc tgcagagctg tggcttacca gatgtggcaa aatctggcaa aggcagagac 300
caaacttcat acctcaaact ctggggggcg gcgggagctg agcgagttgg tctacacgga 360
tgtcctggac cggagctgct cccggaactg gcaggactac ggagttcgag aagtggacca 420
agtgaacgt ctcacaggcc caggacttag cgaggggcca gagccaagca tcagcgtgat 480
ggtcacaggg ggcccctggc ctaccaggct ctccaggaca tgtttgact acttggggga 540
gtttggagaa gaccagatct atgaagccca ccaacaaggc cgaggggctc tggaggcatt 600
gctatgtggg ggaccccagg gggcctgctc agagaagggtg tcagccacaa gagaagagct 660
ctagtctgg actctaccct cctctgaaag aagctggggc ttgctctgac ggtctccact 720
cccgtctgca ggcagccagg agggcaggaa gcccttgctc tgtgctgcca tcctgcctcc 780
ctcctccagc ctcagggcac tcgggcctgg gtgggagtc acgccttccc ctctggactc 840
aaataaaaacc cagtgcctc aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaactcga 898
```

<210> 368

<211> 1117

<212> DNA

<213> Homo sapiens

<400> 368

```
gccctgagcc ccgcatggt ggtgccggag gaccagctga cccgctggca cccgcgcttc 60
aacgtggatg aagtaccga catcgagccg gccgcgtgc cccagccacc cgccacggag 120
aagctcacca ctgctcagga ggtgctggcc cgggcccgca acctgatttc acccaggatg 180
gagaaggcct tgagtcaatt ggccctgcgy tctgctgcgc ccagcagccc cgggtctccc 240
aggccagcac tgccggctac cccaccagcc accccgcctg cagcctctcc cagtgtctctg 300
aagggggtgt cccaggatct gctggagcgg atccgagcca aggaggcaca gaagcagctg 360
gcacagatga cgcggtgccc ggagcaggag cagcggctgc agcgcttaga acggctgcct 420
gagytggccc gcgtgctgcg gagegtcttt gtgtccgaac gcaagcctgc gctcagcatg 480
gagtgggcct gtgccaggat ggtgggcagc tgtgtacta tcatgagccc tggggaaatg 540
gagaagcacc tgctgtcctt ctccgagctg ctgccggact ggctcagcct ccaccgcac 600
cgcaccgaca cctacgtcaa gctggacaag gccgcggacc tsgcccatc cactgcacgc 660
ctggcccacc agacacgtgc tgaggagggg ctgtgagcct gggggccact gtggacagac 720
gtgggcttca gaagctcgct ggcctgggcc caccagcatt ttcttttatg aacatgatac 780
actttggyct tcctttcccc agcggccctg agggccagag gcagatgtgg gctgcaggct 840
gcacagcccg agggctctctg gctgcgggcg gtggggccct tcatggggct cacctggtgg 900
attcacatta aaccggtttc tgtgggcacc tetgtccttg ctgctggtgg ggaagggaag 960
ccagatccag caccctctgg ggggccatcg ggagtggtgc tggxggtgaa gggggctctg 1020
tggcaatatg gggttgggta gtgtgggtgg caaggccatc ccctctaatac ttggaacctc 1080
```

tgaatatggg accttccaca gcaaaggggtg actttttg

1117

<210> 369

<211> 2226

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (24)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (35)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (36)

<223> n equals a,t,g, or c

<400> 369

tataggagaa	agctggtacg	ccnccaggt	accgnntccg	gaattcccgg	gtcgaccac	60
gcgtccgggg	gattattaac	cacttagaat	ataaaattgt	acaacaattt	cacttgttta	120
tttgcatttt	gttttttata	actcttactc	ccttttcccc	tcaaaggaga	actgtgttta	180
tgaaactgta	gttttgcctt	tgatgaaaag	ggcatttgag	aagactttaa	caccaatcat	240
acaggaatat	tttgagcatg	gagatactaa	tgaagttgcg	gaaatgttaa	gagatttaaa	300
tcttggtgaa	atgaaaagtg	gagtaccagt	gttggcagta	tccttagcat	tgagggggaa	360
ggctagtcac	agagagatga	catctaagct	tctttctgac	ctttgtggga	cagtaatgag	420
cacaactgat	gtggaaaaat	catttgataa	attggtgaaa	gatctacctg	aattagcact	480
ggatactcct	agagcaccac	agttggtggg	ccagtttatt	gctagagctg	ttggagatgg	540
aattttatgt	aatacctata	ttgatagtta	caaaggaact	gtagattgtg	tgagggctag	600
agctgctctg	gataaggcta	ccgtgcttct	gagtatgtct	aaagggtggaa	agcgtaaaga	660
tagtggtgtg	ggctctggag	gtgggcagca	atctgtcaat	caccttggtta	aagagattga	720
tatgctgctg	aaagaatatt	tactctctgg	agacatatct	gaagctgaac	attgccttaa	780
ggaactggaa	gtacctcatt	ttcaccatga	gcttgatat	gaagctatta	taatggtttt	840
agagtcaact	ggagaaaagta	catttaagat	gattttggat	ttattaaagt	ccctttggaa	900
gtcttctacc	attactgtag	accaaataga	aagaggttat	gagagaattt	acaatgaaat	960
tccggacatt	aatctggatg	tcccacattc	atactctgtg	ctggagcggt	ttgtagaaga	1020
atgttttcag	gctggaataa	tttccaaaca	actcagagat	ctttgtcctt	caaggggcag	1080
aaagcgtttt	gtaagcgaag	gagatggagg	tcgtcttaaa	ccagagagct	actgaatata	1140
agaactcttg	cagtcttaga	tggtataaaa	atatatatct	gaattgtaag	agttgttagc	1200
acaagttttt	tttttttttt	ttttaagcac	ttgttttggg	tacaaggcat	ttctgacatt	1260
ttataaacct	acatttaagg	ggaattttta	aaggaaatgt	tttttctttt	ttttttgttt	1320
ttcgaggggg	caaggagggg	cagaaaagta	acctcttctt	aagtgggaata	ttctaataag	1380
ctaccttttg	taagtgccat	gtttattatc	taatcattcc	aagttttgca	ttgatgtctg	1440
actgccactc	ctttctttca	aggacagtgt	tttttgtagt	aaaatcactg	gtttatacaa	1500
agctttatth	agggggtaaa	gttaagctgc	taaaacccca	tggtggctgc	tgctgttgag	1560
atactgtgct	ttggggagtaa	aaaaagaaaag	ttatttcttt	gtcttaaaaga	atthtttaaaa	1620
aattagtcac	gagacttatt	catctttcca	gggaacatac	tgattggtct	taaaagacta	1680

gacagttaag taaaagggtg ctggaacatc tatttttcta caaaactgga aaaatgaacc 1740
tggttctaga agaatgtaca ccaaaataaa acatgtgaag cagtattgat tctttattgg 1800
gagtacattt ttttaggtct cttaaacttt aatttcacac agtaaatttt gaatctcata 1860
aggaagcata tttgaacctg gtcaatttaa tcttagtggt cccttgaaaa ctttttttcc 1920
ctacaaaatt ttaagtgaat aatacaatag taaattaaga ttacactggg gaaaaaatg 1980
caggtatcac tttactccat tgttatctga cctagagctt aattaagttt tagaaatatg 2040
taataccttc catcattcca tcatccttaa attctgttac caaataatgg ctaatgttac 2100
aaaaagttat actccagaga cccaaagctt gacatttacc taatgtatga gaaaatatta 2160
ccaattaaca ataaagaatg atcataatctt taaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2220
aaaaaa 2226

<210> 370

<211> 3636

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1937)

<223> n equals a,t,g, or c

<400> 370

caccaaggag cgcgtcaaac ttgaaggggc aaagtgcata gggcagcttt tgatttttgg 60
ggcaaccaac tgggacttga ttggtcgaaa agaagtgcct aaacagcaag ctgcttaccg 120
caatctcggg cagaatttgt gggggcccca cagatatggg tgcctggcgg gggctccggg 180
gcgagacagt gtctcgggct cgtgtgctgc acacagcctc ctcataacca cggaagggaa 240
gctgtggagc tggggtcgaa awgagaaggg gcagctggga catggtgaca ccaagagagt 300
agaagccctt agactcatcg agggcttag ccacgaagka ttgtgtctgc agcatgtggg 360
cggaaccaca ccttggcctt gacggaaacg ggctccgtgt ttgcgtttgg ggaaaacaag 420
atggggcagc tgggccttgg caaccagaca gacgctgttc ccagccccgc gcagataatg 480
tacaacggcc agccaattac caaaatggcc tgtgggstg aattcagtat gataatggac 540
tgcaaaggaa acctctattc ctttgggtgc cctgaatatg gtcagctggg acacaactca 600
gatgggaagt tcatcgcccg ggcacagcgg atagagtacg actgtgaact agttcccccg 660
cgagtggcca tcttcattga gaagacgaaa gatggacaga ttctgcctgt accaaacgtg 720
gttgtacgag acgtggcctg tggcgctaac cacacgctgg tcctggactc ccagaagcga 780
gtcttctcct ggggctttgg tggctatggc cggctgggca cgcagagcag aaggatgaga 840
tggtcccccg cctggtgaag ctggttgact tccctgggcg tggggcttcc cagatctatg 900
ctggttacac ctgctccttt gctgtcagtg aagtgggtgg tctgtttttc tggggggcca 960
ccaacacctc cgtgaatct accatgtacc caaaagcagt gcaggacctc tgcggctgga 1020
gaatccggar cctggcttgt gggaagagca gcatcattgt ggccgccgat gagagcacca 1080
tcagctgggg tccgtcaccg acctttgggg aactgggcta cggggaccac aagcccaagt 1140
cttccactgc agcccaggag gtaaagactc tggatggcat tttctcagag caggtcgcca 1200
tggtgactac aactccttg gtgatagcaa gagatgaaag tgagactgag aaagagaaga 1260
tcaagaaact gccagaatac aacccccgaa ccctctgatg ctcccggaga ctctccgac 1320
tccacacctc tcgcggcagc tgtcatttcc atgtgcaact ggacgggaag tcaaacgagg 1380
aatttaaaaa agcaaaagtt gaccgaagtg catttttgtt tagactccct gaggttccgt 1440
tttacacatg atccaacgtt aactaccttt ttttctgtat gctttccaaa gtcctttttt 1500
tcccttaatg ttgaattaaa atacttgctc atagttgatt taccattcct acaaaaagagg 1560
cagaaacttt gagcaatcta ggtttttttt ttttttaagt tttttcttc ttcttytct 1620
gaatacactc cccaaaacac ccctttccag ttacaattag catcgtgatc caagcagatg 1680
ccacatggaa gaggaatcgc catttactca gaaaaaatgt cccttacagg aaccggcagc 1740

```

agctaggcag tcaccggccc gcctccatcc aaaatcacgc tcgctgctt cggaagcacc 1800
cggtgcactc cttctccgct ttttcttgca gatgggccta ggccggtgtc gggtctgttt 1860
ctccccttgg ctgcctgtac gccacagcc ttctggctgc gacattatag aatcggccgt 1920
gtcccccttg gtgggnatt ggggatctgt gtttagccat ttatatctac tttagctgtt 1980
aaagaggtcc aaatgaaaat caggtgattg tggaccatg gggacttggg ggtggggcag 2040
aggtgggaac atttgtatca gttgagtcag cttggtggct ccctgtggag cagggctgag 2100
ccttgtcacg cgcactcgcc aattaagaga tggaccagcc agcagtcaag tgcattctcc 2160
agtccttgca agaaggatca gccctttctg tgccagcctc gatcgcttg tgctttggtc 2220
tctttttctc ccccccgcct ggatcctgcc tcgcgcgggc cgtcctgttg ctgagactcg 2280
gggtaccggt ctgctgaccc agctoccttt agtcacgttt gcttggctct ggtaccaaatt 2340
agttgggatt accgaagagt ccccttcctt gcgtgtcagc acggatgctg tgactgccac 2400
ctgcgtcctc gtcaagtgcc cgagctcgcc gccgtgtgtg ctgcgtgag tgagttatga 2460
gggtgccttc ccggaaccct cctctcgctt ggaccaaga gaggcgacag ctgtggctgg 2520
ggctcttggt ttccagaggg tctggactgg tttgggtgct ttaaaataga tatttagttc 2580
agtgggtgct atgggggaga tgggactaga acttaagtgt gagacttggg tggatgggaa 2640
agttaaatat tggctctctc aagttttttt tttcttttgc tttgttacca cttgtcactg 2700
tctccatggt aaaatgccaa aaatgatgta gttgttgttg cttttttccc tattttccac 2760
cccagtcgct ccttaccgtg actcctgccc ttggagggca tgtagcagtg tctgtcctgc 2820
cagtcccaag gccctgtggg aggagactgg cctgcctctc tctaagactt agtctgacgc 2880
cacgcgcacg tcttgctctg tgttcaatca gtagtcagg ggagaagctt ctgctacttc 2940
agagctttgc taaactaacc taatttgtcc aaatcacccc aaaaccacca tctctgacgt 3000
aagcttccat gcgacagcct gatccgtttc cctggacagg tctctttcct ggaatgcagc 3060
ccaggcacct gtgctcctgg cacccttgag gtctctcctt tgagccgtgg tcaccgagag 3120
ggttgaggag gcagcacccg aggtccagc ctttgaggga gcctccctgg gcttagctgg 3180
acttagatct tcggtggcct catgtaaacg tggcagccag cctcttctag aaccctagcc 3240
cagggactgg agcaggaaag ggaccttcaa agtgaagact gccttgtccc gcagctcctt 3300
ctggcttaga ttgaaamatg ggcttcctaa tgggttaaat cctttaaaac aaggagtgtg 3360
gggggaaggg tgctcgtgcac tcctagagaa aggtacacag ttgcccggtt gggaatgtgc 3420
ttggcgctga ctgcgggcat ctgactggtc ttccagctca ggaaaaagaa tttgaaagag 3480
gcttagcgtg aaggggaatc aaagaggagg ttgtgatttg gtcgaagggt cctgggttag 3540
tgctgtaatt gtcttattat tttttttata tatatatttc ttggagtaaa cattttaaat 3600
aaacaacatt gtctactgtc aaaaaaaaaa aaaaaa 3636

```

<210> 371

<211> 4039

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1085)

<223> n equals a,t,g, or c

<400> 371

```

aattcggaac gagggatgaag cacaaggatt aagttggaag agctgtaaat tgcatgtgca 60
tatttgtcta ttttttctat aagttttatt gcaagaggta aagaagaaaa ctatatatat 120
atatcttatt tagataatct cagtaccctt tctggcattt ttgccctgta taggttgact 180
tggaattcgc gccttttttag aggcattaac tactcctcgt aagtgttgca tttacatggc 240
tgtttagaaa actgctgccc aaattttatt tatatttttg tacagattct gcagtttatg 300
atattgtttt ctaaaaacaa atgctgttta tacatatgag atagctattt tgataggatt 360
tgctcacata gttcctgcaa acttcagatg tacaagttgc acttgtaact ttatagagtt 420

```

```

gtaatgtttt atatgtgtat ggtgcaagag aaaattggat caaatcaayc tgcagttgat 480
gtccccaat gcaaacacag gcacacacat gcacacaccc ataaacacac acacagtga 540
tttaaraaag ggccaggtga tatcacaccc aaatttcaca agcactgacc ccctggcacc 600
aacacccgcc agtactgtga ctcccaaagc cagagccaca tgtgctcatc aaacttgcat 660
taagcagttg gcgggagatg gctgtggagc tgggggttta agtgatggtt ctcttttgct 720
ccctcttytg agggtaaagc tactgtcttt cttaagagtg tatttatgcc aagtttgccg 780
ttttaattgt ttttattttg twttttaatg aaaaccaga tctttccttt ttggcataat 840
ttttatgatg acctgaaatt ttacatccga acaaaatttt acatccgaaa agcaaccaac 900
ttcttcatgg aactcagccc tgttgcaatg cttagggcc ttaaagaaga aaatctcccc 960
agaaggcatc catcatgttg cttaattgtc ttctgcagct tcctttccct agagctttcc 1020
ctgtgttgct aagagctgra aatggcatct tcgtgatcac cacagtgagc ttggctcgcc 1080
tcgngcggcc cggggatgca ctcttacaac atgtgtgact cttgaacctg gagttcatca 1140
cattacgtca cagcttccca tctggttgct ttcttgagtc agctacttca cacttgtcaa 1200
ggctgtttta ccccaaaact cagacaggac ttctatgca tgttttcctt cctccccca 1260
attccccccc catcacctta tctcccagga cacacttgag aagtagcttt ttattcctag 1320
tgggtgtacat ttaattttta aaaggttgca atgtatcatg cttgttgccg aaactgttta 1380
tggccttctt gtttcagttt tttcttttct tccaatggta ctttagctgt tgagtgcagg 1440
ttacaaccta tattgttatg cagatggctt ctttaggaat aacttttata tttattttaa 1500
aattttttaa ttatgggatg ttttgttgtt gttgttgtct ttgttgttg tcatattgtca 1560
atattcagtc accaattctg ctcaactctt gccatggata aaattgggtc tttctggcta 1620
attaaaaaag acaactttat aaaatggcac tttaagcaag ccatagttag ttttattttt 1680
gtaatgcaca tggcaaaagc aagacgtttg tgatgaagga actgctcatc taagcaaaag 1740
atltgagtat gatatgataa aggttttcta cattctaatt tactttttcc cccacttga 1800
atgtgtttta aaggctaatt atcagctcag tagagcagtg agaaactgat caaattgcac 1860
ttgttctcct acaagcaacc tccacgcaga cacctcgtac tgctacaggt gtgtcatttc 1920
ctttaatagg accagggacc atgtaactga ggtgagggtt gtagtaratg cttccaggtt 1980
cagtatgcct gtaaatttta agagcttccc ttcttgtagc agaacaagtc tgcccagatt 2040
ccatgctttc tataactgga ggacctggca aacctgccgc atgctgcaca catctaccta 2100
cgtacacata tacaatagta ttgatgattc tgaacaataa cagggtaaaa cagttggttt 2160
gccattgtta aaaactgatt tacagtaact tacaacaact gtacttttgt tggattagca 2220
aatcatgtgt ttaaacaaat cccatatgtt gggcaacagt tcaaataagc acggagaagt 2280
gttgcccaaa cttggttctc tgactcttat gtatttgtaa ggctgggctt caaaatcaaa 2340
acaaaaaccc caaaaacagc aggcaaatgc tttttaactc tgacaccgtt gccataaatc 2400
cctgatactc aaagtctaac aagaaagaca tggaaaatta gcagccatt ttcagaaaga 2460
tcaaaatgat ctagggttct aattgctttt gcctcctatt cttacaaagt gatgtcccaa 2520
cagggaacag taggagctgg agtgggatct ccaagtccca gtttgagtgt gggatgtgct 2580
tccagcagtg ccttcccttt atgaaagaca tcacatggca tccagggccca ggcaggcagc 2640
ttgaggtgcc tttacgagaa aaccgagctg gggctgggag aggacagtta ttgacactga 2700
tgtgcaatga agtgacaaga tgagagcaga atcgtaagag ctttgaattt gaagtgagtt 2760
ttttccccc ataagttatt tattcctttt ttctgtgtaa atatatttat tttactgtgg 2820
agcgctaaca tctggatcgt aacatgtgca gaatgtatgg taggaatgta ttctcttgta 2880
ggaatgtaaa tctgtattaa aaggggtcc aagccaggcc cccaggtctt ctcatgtat 2940
gcacagtccg cattcatttt tactcttctc taatatgggt ctatttgaaa tatgcaaaag 3000
gtatgaggaa tgttttaata cctccaaatt tttaagaaaa gcatcaaagg gttgatattt 3060
tttaaagttt ttttagtagc actttctctg gatgacagaa ggggcaacca catgggcacc 3120
cttgttcata ccaaagggtg agcagtggcc agagcctcct ctgcacctct cgagtgtctt 3180
taccaattga gctttttatc gccatagccc cttggagtgc cccagctgcc ctgaggtaa 3240
tcaaggaaaa tttcttaatg aaataagctc caaagagcca aagtatcaac ttacagatcg 3300
tttttaaagc ttaaatatat gaaccacctt tgtggtaaac aatgaattat gaataccgca 3360
gggcagcctt cttaaagtac aaatgtaaaa aaaaaaaaaa aaaaactcta cttcgtgcag 3420
caattgctac tctatacgaa ttgtcttaat ttgaaaacct tgctgttaca aattggacct 3480

```


ttatacattt tctgaaaaca atgaaaagag tatatttaac cttttctggc tgtaaattggt 3540
taccttcctg taactgcccc gcacctggag gcatggagtt gtgtgcatcc tgcttatgta 3600
caattgtttt cagtgtttct aagaatgagt ctgaatgggt cttgaaaatt agccaggatc 3660
aaatgctatt gcagacaaaag ccaataaaaaa gttggacttc ttttggggat aacaagtttt 3720
ggaagagaaa tgcaggccat atgtgcgcat gaccgagatt ttgaaaaaag atgtacatag 3780
tgacatgttt ggtgcatggg ttttgaggag ggcttttgtc aaaaaggagg tataaccttt 3840
ccccacaga cctgagagct gtgccttttc tatgcaatat tacagacgtt acatcggaac 3900
ccagatggct gtattcacat gtaggttttg gctgtaatct aaacaattgg acagattaaa 3960
tgtacatgga aatgagcagt cttacttttg tagttttata ttatacaata aacagttaaa 4020
agatgaaaaa aaaaaaaaaa 4039

<210> 372

<211> 1599

<212> DNA

<213> Homo sapiens

<400> 372

ccatccagct ggggatgcag agcacctgat gcacctggaa caggtgctct gcatccccag 60
ctggatggca aaattctttt cttggacact tgaacccatc ttctcttctt cagaaccac 120
cagcgaacag aattgggatg ggagccacgc tggacatcca gagacagcag agaattggagc 180
tgctggaccg gcagctgatg ttctctcagt ttgcacaagg gaggcgacag agacagcagc 240
agggaggaat gatcaattgg aatcgtcttt ttctctcttt acgtcagcga caaacgtaa 300
actatcaggg cggtcggcag tctgagccag cagcgcccc tctagaagtt tctgaggaac 360
aggtcgcctg gctcatggag atgggatttt ccagaggtga tgctttggaa gccctgagag 420
cttcaaacia tgacctcaat gtcgccacca acttctctgt gcagcactga tagtcccagg 480
ccaacactgg gaccggaccg gcagccgagt gacagtgcgt ggtccccacc atcagatcag 540
cccggggacc gagcatctct ggtgctgatg ttcttggtgg aagagggagg ttccaccgca 600
cccctgccct caaccgcaag actgttgccg ttttagtggt gagataagtt tgccattaca 660
ttagcatgta ttttctatct atatttttta ttgggcatth tccctagggt ggagagtcag 720
cactcgtttt gaatgtgttt aaaatgcatt aaaatggaag atttctgcag gcagttgaat 780
ggcactccag atggggaatt gctgtaaccc tcttactgta acatgtcatc tcctgcgtcg 840
tgatggggag agggtaattg tacttcacaa aggacatgtc agatccttct tcatggactt 900
tttttagttac tgttttttct ctcaaacttg ttttcgaatc tcctgggagt gagggagaaa 960
cagggagctg aatcctcccc caagctgttc caggccagag gactctgcag taccttctcc 1020
tacatctagt aacaaagaat ggtgataacc atgcaactgt tcaaggttct ggagttctcc 1080
atgaaacttg ggttaatttt gctcagagta tccagagtta gccactaggc tgcgggtgaa 1140
atgggatgga gaagaacaac agcaggcttc ctggagccac atgggctgac tagggcactc 1200
tgtggctggc ctggcatggg ctgagcccag gaagaggaga aacgatccct tgccctgccc 1260
tccctgtggc agggctaact gcctggccct cctggctcgc agccagccag cccctggca 1320
gcaggttctc ctcagggtt gggtcttcaa cctgtggcga caggaggcag ggcagactgt 1380
ggaggacagg atgcagggtca gggagagggg aggcaggggt ggaccgccat gagcatgaaa 1440
agaccggaag caagttgact cttgcaatgt gcaactgtta tgttctgcaa aatgagcaac 1500
gatgtatcaa attgatgcaa atttagatgt tgatacttac aataaagttt ttaatgtgtt 1560
ttaaaaaaaaa aaaaaaaaaa aaaaaaaaaa agggcgggc 1599

<210> 373

<211> 464

<212> DNA

<213> Homo sapiens

<400> 373

313

```

ctcaaaaatc accagaaaac tcatactagt gaaaaatcct ataaatgtaa tgaatgtaga 60
aaggccttta gttactgctc tggctcttatt caatgtcagg tcattcatac tatagaaaaa 120
ccttatgaat acggtaaatg tggcaaagcc tttaggcaga ggacagacct taaaaaacat 180
cagaaaaatgc ataccgarga gaaaccctat gaatgtaatg aatgtgggaa agcctttagc 240
cagagcacat atcttacaaa acaccaaaaa attcatagtg aagagaaaatc aaatatacat 300
actgagtgtg gggaaaccwt twgrcaaaac tcttcttttt tacaacaata aaaacctcac 360
actggagaga ttctctgaat gccttaagaa tttggttaat atggagaccc ttcccagggg 420
aaccagaagg aggatcgtga aaacctgttg actacttaga tgat 464

```

<210> 374

<211> 890

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (886)

<223> n equals a,t,g, or c

<400> 374

```

ggctgctgga ggcgagggct tcggaagtct tcatgctagt ctctggtgggt tccgcggtgt 60
cgctcgctggc tgtgcgcgtc atttccgggc gtcacgtaac ggagtggcca acggcctgca 120
gagcaacatg cccaagtttt attgtgacta ctgcgataca tacctcacc atgactctcc 180
atctgtgaga aagacacact gcagtggaa gaaacacaaa gagaatgtga aagactatta 240
tcagaaatgg atggaagagc aggctcagag cctgattgac aaaacaacgg ctgcatttca 300
acaaggaaag atacctccta ctccattctc tgctcctcct cctgcagggg cgatgatacc 360
acctcccccc agccttcccg gtccctcctc ccctggtagt atgccagcac cccatattgg 420
gggccctccc atgatgccaa tgatggggcc tcctcctcct gggatgatgc cagtgggacc 480
tgctcctgga atgaggccgc ccatgggagg ccatatgcca atgatgcctg ggcccccaat 540
gatgagacct cctgcccgtc ccatgatggt gccactcgg cccggaatga ctcgaccaga 600
cagataagga tagaggggag gccttattgt atcggtttta tattacctgt tctgcttcac 660
caggagatca tgctgctgtg atactgagtt ttctaaacag cataaggaag acttgctccc 720
ctgtcctatg aaagagaata gttttggagg ggagaagtgg gacaaaaaag atgcagtttt 780
cctttgtatt gggaaatgtg aaaataaaat tgtcaactct ttcagttaaa aaaaaaaaaa 840
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaanaaaa 890

```

<210> 375

<211> 1874

<212> DNA

<213> Homo sapiens

<400> 375

```

gttcaggaac ttaggctaga aaggaacaca gtaaaactgaa ttgatccgtt tagaagttaa 60
caatgaagtt tcttctaata ctgctcctgc aggccactgc ttctggagct cttcccctga 120
acagctctac aagcctggaa aaaaataatg tgctatttgg tgaaagatac ttagaaaaat 180
tttatggcct tgagataaac aaacttccag tgacaaaaat gaaatatagt ggaaacttaa 240
tgaaggaaaa aatccaagaa atgcagcact tcttgggtct gaaagtgacc gggcaactgg 300
acacatctac cctggagatg atgcacgcac ctcgatgtgg agtccccgat gtccatcatt 360
tcagggaat gccagggggg cccgtatgga ggaaacatta tatcacctac agaatacaata 420
attacacacc tgacatgaac cgtgaggatg ttgactacgc aatccggaag gctttccaag 480
tatggagtaa tgttaccctc ttgaaattca gcaagattaa cacaggcatg gctgacattt 540

```

```

tggtgggttt  tgcccggtga  gctcatggag  acttccatgc  ttttgatggc  aaaggtggaa  600
tcctagccca  tgcttttggg  cctggatctg  gcattggagg  ggatgcacat  ttcgatgagg  660
acgaattctg  gactacacat  tcaggaggca  caaacttggt  cctcactgct  gttcacgaga  720
ttggccattc  cttaggtctt  ggccattcta  gtgatccaaa  ggccgtaatg  ttccccacct  780
acaaatatgt  tgacatcaac  acatttcgcc  tctctgctga  tgacatacgt  ggcattcagt  840
ccctgtatgg  agacccaaaa  gagaaccaac  gcttgccaaa  tcctgacaat  tcagaaccag  900
ctctctgtga  ccccaatttg  agttttgatg  ctgtcactac  cgtgggaaat  aagatctttt  960
tcttcaaaga  caggttcttc  tggctgaagg  tttctgagag  accaaagacc  agtgtaatt  1020
taatttcttc  cttatggcca  accttgccat  ctggcattga  agctgcttat  gaaattgaag  1080
ccagaaatca  agtttttctt  tttaaagatg  acaatactg  gttaattagc  aatttaagac  1140
cagagccaaa  ttatcccaag  agcatacatt  cttttgggtt  tcctaacttt  gtgaaaaaaa  1200
ttgatgcagc  tgtttttaac  ccacgttttt  ataggacct  cttctttgta  gataaccagt  1260
attggaggta  tgatgaaagg  agacagatga  tggaccctgg  ttatcccaaa  ctgattacca  1320
agaacttcca  aggaatcggg  cctaaaattg  atgcagtctt  ctactctaaa  aacaaatact  1380
actatttctt  ccaaggatct  aaccaatttg  aatatgactt  cctactccaa  cgtatcacca  1440
aaacactgaa  aagcaatagc  tggtttgggt  gttagaaatg  gtgtaattaa  tggtttttgt  1500
tagttcactt  cagcttaata  agtatttatt  gcatatttgc  tatgtcctca  gtgtaccact  1560
acttagagat  atgtatcata  aaaataaaat  ctgtaaacca  taggtaatga  ttatataaaa  1620
tacataatat  ttttcaattt  tgaaaactct  aattgtccat  tcttgcttga  ctctactatt  1680
aagtttgaag  atagttacct  tcaaaggcca  agagaattct  atttgaagca  tgctctgtaa  1740
gttgcttcct  aacatccctg  gactgagaaa  ttatacttac  ttctggcata  actaaaatta  1800
agtatatata  ttttggtcca  aataaaattg  aaaaaaaaaa  aaaaaaaaaa  aaaaaaaaaa  1860
aaaaaaaaaa  aagc                                     1874

```

<210> 376

<211> 2018

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1997)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2012)

<223> n equals a,t,g, or c

<400> 376

```

gccacatccc  ggcagccctc  ctacckgcgc  acgtggtgcc  gccgctgctg  cctcccgcctc  60
gccctgaacc  cagtgcctgc  agccatggct  cccggccagc  tcgccttatt  tagtgtctct  120
gacaaaaccg  gccttggtga  atttgcaaga  aacctgaccg  ctcttggttt  gaatctggtc  180
gcttccggag  ggactgcaaa  agctctcagg  gatgctggtc  tggcagtcag  agatgtctct  240
gagttgacgg  gatttcctga  aatgttgggg  ggacgtgtga  aaactttgca  tcctgcagtc  300
catgctggaa  tcctagctcg  taatattcca  gaagataatg  ctgacatggc  cagacttgat  360
ttcaatctta  taagagttgt  tgccctgcaat  ctctatccct  ttgtaaagac  agtggcttct  420
ccaggtgtaa  stgttgagga  ggctgtggag  caaattgaca  ttggtggagt  aaccttactg  480
agagctgcag  caaaaaacca  cgctcgagt  acagtgggtg  gtgaaccaga  ggactatgtg  540
gtggtgtcca  cggagatgca  gagctccgag  agtaaggaca  cctccttgga  gactagacgc  600
cagttagcct  tgaaggcatt  cactcatacg  gcacaatatg  atgaagcaat  ttcagattat  660

```

```

ttcaggaaac agtacagcaa aggcgtatct cagatgccct tgagatatgg aatgaaccca 720
catcagaccc ctgcccagct gtacacactg cagcccaagc ttcccatcac agttctaaat 780
ggagcccctg gatttataaa cttgtgcgat gctttgaacg cctggcagct ggtgaaggaa 840
ctcaaggagg ctttaggtat tccagccgct gcctctttca aacatgtcag cccagcaggt 900
gctgctgttg gaattccact cagtgaagat gaggccaaag tctgcatggg ttatgatctc 960
tataaaaccc tcacacccat ctcagcggca tatgcaagag caagaggggc tgataggatg 1020
tcttcatttg gtgattttgt tgcattgtcc gatgtttgtg atgtaccaac tgcaaaaatt 1080
atttccagag aagtatctga tggataaatt gcccaggat atgaagaaga agccttgaca 1140
atactttcca aaaagaaaaa tggaaactat tgtgtccttc agatggacca atcttacaaa 1200
ccagatgaaa atgaagtctg aactctcttt ggtcttcatt taagccagaa gagaaataat 1260
ggtgtcgtcg acaagtcatt atttagcaat gttgttacca aaaataaaga tttgccagag 1320
tctgccctcc gagacctcat cgtagccacc attgctgtca agtacactca gtctaactct 1380
gtgtgctacg ccaagaacgg gcaggttatc ggcattggag caggacagca gtctcgtata 1440
cactgcactc gccttgcaag agataaggca aactattggg ggcttagaca ccatccacaa 1500
gtgctttcga tgaagtttaa aacaggagtg aagagagcag aaatctccaa tgccatcgat 1560
caatatgtga ctggaacat tggcaggat gaagatttga taaagtggaa ggcactgttt 1620
gaggaagtcc ctgagttact cactgaggca gagaagaagg aatgggttga gaaactgact 1680
gaagtttcta tcagctctga tgccttcttc cctttccgag ataacgtaga cagagctaaa 1740
aggagtgggt tggcgtacat tgcggctcct ccggttctgc tgcgtgacaaa gttgtgattg 1800
aggcctgcga cgaactggga atcatcctcg ctcatagcaa cttcggctct tccaccactg 1860
atthttaccac aactgttttt ttggcttgct tatgtgtagg tgaacagtca cgcctgaaac 1920
tttgaggata acttttttaa aaaataaaac agtatctctt aatcactgga aaaaaaaaaa 1980
aaaaaaaaaa aaaaccncgg ggggggcccc gnacccca 2018

```

<210> 377

<211> 818

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (818)

<223> n equals a,t,g, or c

<400> 377

```

atcgacccac gcgtccggag cggttgcgca gtgaaggcta gaccgggttt actggaattg 60
ctctggcgat cgaggggtcc tagtacaccg caatcatgtc tattatgtcc tataacggag 120
gggccgctcat ggccatgaag gggaagaact gtgtggccat cgctgcagac aggcgcttcg 180
ggatccaggc ccagatggtg accacggact tccagaagat ctttcccatg ggtgaccggc 240
tgtacatcgg tctggccggg ctgcgcaact acgtccagac agttgcccag cgcctcaagt 300
tccggctgaa cctgtatgag ttgaagggaag gtcggcagat caaaccttat accctcatga 360
gcatgggtgg caacctcttg tatgagaaac gggttgggcc ttactacact gagccagtca 420
ttgccgggtt ggaccogaag acctttaagc ctttcatttg ctctctagac ctcatcggct 480
gccccatggt gactgatgac tttgtgggtc gtggcacctg cgccgaacaa atgtacggaa 540
tgtgtgagtc cctctgggag cccaacatgg atccggatca cctgtttgaa accatctccc 600
aagccatgct gaatgctgtg gaccgggatg cagtgtcagg catgggagtc attgtccaca 660
tcatcgagaa ggacaaaatc accaccagga cactgaaggc ccgaatggac taaccctgtt 720
cccagagccc actttttttt ctttttttga aataaaatag cctgtctttc aaaaaaaaaa 780
aaaaaaaaaa accccggggg gggcccgga ccaatttn 818

```

<210> 378

316

<211> 2565

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1508)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2565)

<223> n equals a,t,g, or c

<400> 378

```
ggcacgagct cgtgccgggg ccatagctgt tactgaagga agtagcctac gtccacgcct 60
acaactgaag tctcttgaca aacacctcac ccctgcctcc gggatgaaag ggggtaacct 120
agacctgaat gggcttgacc atctcacaac tgctcgcgtg acgaccgcat tcgtggcagg 180
taagaagatt gctgtatcaa ctcaagaaag cagtaacttc actgtctttg tattttgaat 240
tgcaacaaca actttgatat caacaatgaa gcaatgatat ctaagaacma aagartattt 300
gccaacagtc atcataatat caagtgattg tataagcaga aacaagctgt cacagacctg 360
tgcgtcagct aatatatgga gaatgcttct tctgatacta ttacttaga ggcagtttta 420
atataaatca tttcaattat atctacatca aataaaataa aaatgagtga agcccccaga 480
ttcttcgttg gaccagaaga tacagaaata aatcctggaa attatcgaca tttctttcac 540
catgcagatg aagacgatga ggaggaagat gattctycac cagaaaggca gattgtgggt 600
ggaatatgtt ccatggmaaa gaaatccaaa tccaaaccaa tgaaggaaat tcttgracgg 660
atctccttat taaatatat cacagtagta gtatttgaag aggaggttat tttgaatgaa 720
ccagtggaaa actggccttt atgtgattgt cttatttctt tccattctaa aggatttcca 780
ctggacaaag cggttgccta tgcaaaactc aggaatccat ttgtaatcaa tgacttgaat 840
atgcagtagc tcttgaaagc agctttgagt tagaagtatg tgtgttacac cctcacatta 900
gtgtgctgtg tggggcagtt caacacaaat gtaacaatgt atttttgtga atgagagttg 960
gcatgtcaaa tgcctcctct agaaaaataa ttagtgttat agtcttaaga tttgttttct 1020
aaagttgata ctgtgggtta tttttgtgaa cagcctgatg tttgggacct tttttcctca 1080
aaataaacaa gtccttatta aaccaggaat ttggagaaaa aaaaaaccct ggttttttat 1140
ttttgtattt tattattggt tacttcaaac tttgttttac agcgtcctcc acaaaacctc 1200
tagaatgcac tagatatatt tttcttgag tcataatcat gatgcatacc aacacaacac 1260
tactcaaatt atatttcatt gagatgcatg ttgcattgag gagtcaactt gacatagagt 1320
ggagactttt tcaaaatggc ttttacatcc taatgaaagt ttgggaagta taccctctct 1380
gccttttcat cagtgccttg tgggccagct ggcacccttt ctgaggtttg tgttttgtgc 1440
taaagtgttt tgccttaaa taggagaggg tcaaaaacat caagatttca ggaaaatggc 1500
gacastgnca taatggaacc cccctgcttc tattttgttc ttttaattac tatttatagc 1560
cccagttacc ttctgaattc tgaagtgtat atacctccat gttcctgaaa acaagaaaac 1620
tcttacttcc tgatawtcca tagactgcct tcccagggtg ttgagaacat agagaatggt 1680
acacatttat tttactctaa atgatctttt acccctgtta gctaactctt gtgttttctt 1740
caactttatt aattacagtg attgcatttt tagcatccag ttgtaagatg aatatattaa 1800
acagctacca gtgttggtga tacctcatcc ttgaaaggct tagttcattt gtgttttata 1860
cttcagtttt tccagcatag cagaaaatgc cgcttataat ttttgtgcac acaaaccttg 1920
gattccccctg taaagtgtgt attgtttcat agcatgcggc actggccttt tttcatccta 1980
ctcattacag gcaaaactca tgtcttattt atgaggattt tatagatcat tttctgtaac 2040
aggtgacaaa agcagaaaaag aatgaagagg ctgaagtatg aactaccctt ggagcccata 2100
tacatgatat aggcaatttc ttttgtatgt taattcrgtc aaaaatacta cccacttgat 2160
```

317

```

gttttctaata ctgatgtgag ctcatgttac acagactttt agtaagtaac ccgtgactag 2220
aaaataaact ggatgcttag gagagagtgt cagatgtata agatgctaata aaaacctgtt 2280
taatatattatt gtttagctgta agtttttggg aaatactgaa caaattagtc cacaatcaag 2340
tgtctactttt tcccttcact gtagggcctc tccctgcaca gagcagtctg tttagctgtg 2400
aacaccacaa tctgcagatg ttcaagtcctc ttacataaaa tggcatagta tttatatgta 2460
acctatgcat attctcctgt atattttaaa tcactctctac attaaaatac ctgataaaat 2520
gtaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaggg ggggn 2565

```

<210> 379

<211> 1680

<212> DNA

<213> Homo sapiens

<400> 379

```

ccaaagtgtt ggaattccag gcatgagcca ctgcgcccag tctacacact aattcttgtt 60
agcccaacag ctgttctgtt ctatctaccc ctcatttcac gctcaaggag tcatacctag 120
aatagttaca cacaagaggg aaactggaag ccaaactctg tacagtattg tgtagaaagt 180
cacctcccta ctctttttat ttacatgag tgctgatgtg ttttggcaga tgagctttca 240
gctgaggcct gatggaaatt gagataacct gcaaagacat aacagtattt atgagttata 300
tcttagttct tgaaattgtg gaatgcatga ttgacaatat atttttaatt tttatttttt 360
caagtaatac cagtactgtt taactatagc cagaactggc taaaattttt atattttcag 420
agttgaagtt ggtgaagaca ttcatgattt aaacaccaga tcttgaaagg ggttaaatct 480
actttgaaat gaactctgaa tcagtatttc aaagcttttc tggtaatttt agtgatctta 540
tttgattaga ctttttcaga agtactaaat aaggaatttt aacaggtttt tattaatgca 600
cagataaata gaagtacagt gaggtctata gccattttat taaaatagct taaaagtttg 660
taaaaaaatg aatctttgta attacttaat atgttagtta agaaccctgc aagcttatat 720
ttgctagact tacaatttat tttaaatgca tttatctttt ttgacactat tcagtggaaat 780
gtgtaagcta gctaattctt gttttctgat ttaaagcact tttaaatctt atcctgcccc 840
ctaaaaacaa aagggttttg taacaagggg aaattttaaga ttgttaacct tgtttttcag 900
aagggttact gttaattgca cataaacatg aaatgtgttt tcccctgtgt actaacacat 960
tctaggcaaa attcaaactt atagtggtaa agaaacagggt tgttcacttg ctgaggtgca 1020
aaaattctta agacttctgt ttgaaattgc tcaatgacta ggaaaagatg tagtagttta 1080
ctaaaattgt ttttctacca tatcaaatta aacaattcat gcctttatag ggtcaggcct 1140
acaatgaata ggtatggttg tttcacagaa ttttaaaata gagttaaagg gaagtgatgt 1200
acatttcggg ggcattaggg tagggagatg aatcaaaaaa tacccttagt aatgctttat 1260
attttaatac tgcaaaagct ttacaaatgg aaaccatgca attacctgcc ttagttcttt 1320
tgtcataaaa acaatcactt ggttggttgt attgtagcta ttacttatac agcaacattt 1380
cttcaattag cagtctagac attttataaa cagaaatctt ggaccaattg ataataattt 1440
tgactgtatt aatatttttag tgctataaaa tactatgtga atctcttaaa aatctgacat 1500
tttacagtct gtattagaca tactgttttt ataatgtttt acttctgcct taagatttag 1560
gtttttttaa tgtatttttg ccctgaatta agtggttaatt tgatggaaac tctgctttta 1620
aaatcatcat ttactgggtt ctaataaatt aaaaattaaa cttgaaaaaa aaaaaaacga 1680

```

<210> 380

<211> 1267

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (4)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (214)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1165)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1255)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1262)

<223> n equals a,t,g, or c

<400> 380

```
aagnaagaaa accacaacta aaactggaaa tgtatatattt gtatatattga gaaaacaggg 60
aatacattgt attaataacca aagtgttttg tcatttttaag aatctggaat gcttgctgta 120
atgtatatgg ctttactcaa gcaratctca tctcatgaca ggcagccacg tctcaacatg 180
ggtaaggggt ggggggtggag gggaatgtgt gcanctgttt tacctaggca ccatcattta 240
atgtgacagt gttcartaaa caaatcagtt ggcaggcacc agaagaagaa tggattgtat 300
gtcaagattt tacttggtcat tgagtagttt ttttcaatag taggtaattc cttagagata 360
cagtatacct ggcaattcac aaatagccat tgaacaaatg tgtgggtttt taaaaattat 420
atacatatat gagttgccta tatttgctat tcaaaatttt gtaaataatgc aaatcagctt 480
tataggttta ttacaagttt tttaggattc ttttggggaa gagtcataat tcttttgaaa 540
ataacatga atacacttac agttaggatt tgtggtaagg tacctctcaa cattaccaaa 600
atcatttctt tagagggaag gaataatcat tcaaatgaac tttaaaaaag caaatttcat 660
gcactgatta aaataggatt attttaarta caaaaggcat tttatatgaa ttataaactg 720
aagagcttaa agatagttac aaaatacaaa agttcaacct cttacaataa gctaaacgca 780
atgtcatttt taaaaagaag gacttagggg gtcgttttca catatgacaa tgttgcattt 840
atgatgcagt ttcaagtacc aaaacgttga attgatgatg cagttttcat atatcgagat 900
gttcgctcgt gcagtactgt tgggttaaattg acaatttatg tggattttgc atgtaataca 960
cagtgaagaca cagtaatttt atctaaatta cagtgcagtt tagttaatct attaatactg 1020
actcagtgtc tgccttttaa tataaatgak atgttgaaaa cttagggaag caaatgctac 1080
atatatgcaa tataaaatag taatgtgatg ctgatgctgt taaccrragg gcagaataaa 1140
taagcaaaat gccaaaagggt gtctnaattg aartgaaaat gtaattttgt ttttaaaaaa 1200
ttgtttatct tttatttagg ggggggtgggt aattattagt taagtttttt ttaanaaaaa 1260
anaaatt 1267
```

<210> 381

<211> 1031

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1015)

<223> n equals a,t,g, or c

<400> 381

```
ggtccaggat tctagcagtc ctggggcact gacctttgcc agctacctgg gggagggcctt 60
gccactggaa aacctttcag gccgccccca tcagtgggct ccaaagtaaa tggctgaaaa 120
caaaaatggt tcaacttccta acagttttcc tttttccact gtgtgactga aagctcctat 180
atcattttat atttctgaat ctataaaaca aaacaaacaa gcctgamagt gtctggarga 240
rccaaagggt gcctccctgt ccccaaatat attggctata tgagagtaat tttaccctc 300
tacgtaccta aaggcaccca gtacactagt ctgtggggtc ctggagcctg tctcttcttt 360
ctggagggtc aaactgaata gcaataatta cgttacccaa agcatgtgga ggaaaagtga 420
aaccagccac ggagacgctg gccacgggc tcggcctgcg gtgtggcctg ctttgctcac 480
cagcgtcagc cgctcatttc cttctcatga agtcccatct ggtcatgggg acgagggccg 540
ggagggcacc gggtagcctt ttcacacttg gggattaggg gagtggagaa agatttgggc 600
catgcatgca aagtcaaagt ttaaaatttt atccttttca aatagatgat ataataacc 660
tatacatgat ataataattg tatatatgaa atctctctat atttgtttaw tttgagccat 720
tcaatctaaa ccaatgtaca ggtgtacaat gaaaaattta aatgcttagt tatttttccc 780
aacacagtgt aaagtcaccc tcctctgaga gtgggatgtg cagagttttg atgttgcagc 840
tttgctcact tcctggcaag ggcaggtcat gcctcaattt gtaatgggag tctggggtaa 900
gggtgggggt tgaaagttgt tatcttttaa tacatgtaca aatcgttgtc aaaagtaacg 960
ttattaaaat agatttatta tccctgaaaa aaaaaaaaaa aaaaaaaaaa aaaaancccg 1020
ggggggggcc c 1031
```

<210> 382

<211> 1597

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1577)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1579)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1597)

<223> n equals a,t,g, or c

<400> 382

```
atcacgtgga cgctactcgc tatccccggc ctgttggett cttccgcgct ggagtatcca 60
gataggcgac acgccgrcgg gcggctgagg cgggaatggc tgctgtactg cagcgcgtcg 120
agcggctgtc caatcgagtc gtgcgtgtgt tgggctgtaa cccgggtccc atgacctcc 180
aaggcaccaa cacctaccta gtggggaccg gcccaggag aatcctcatt gacactggag 240
aaccagcaat tccagaatac atcagctgtt taaagcaggc tctaactgaa tttaacacag 300
```


320

```

caatccagga aattgtagtg actcactggc accgagatca ttctggaggc ataggagata 360
tttgtaaaag catcaataat gacactacct attgcattaa aaaactccca cggaatcctc 420
agagagaaga aattatagga aatggagagc aacaatatgt ttatctgaaa gatggagatg 480
tgattaagac tgagggagcc actctaagag ttctatatac ccctggccac actgatgac 540
acatggctct actcttagaa gaggaaaatg ctatcttttc tggagattgc atcctagggg 600
aaggaacaac ggtatttgaa gacctctatg attatatgaa ctcttttaaa gagttattga 660
aaatcaaagc tgatattata tatccaggac atggcccagt aattcataat gctgaagcta 720
aaattcaaca atacatttct cacagaaata ttcgagagca gcaaattctt acattatttc 780
gtgagaactt tgagaaatca tttacagtaa tggagcttgt aaaaattatt tacaagaata 840
ctcctgagaa tttacatgaa atggctaaac ataatctctt acttcatttg aaaaaactar 900
aaaaagaagg aaaaatattt agcaacacag atcctgacaa gaaatggaaa gctcatcttt 960
agtttcagat taaagaaagc tttgttttat tttgctttsa gagaatggta tgttttctta 1020
actataggtt attttataga gaatataaaa gtataaaaca ttaaaaataa ccctagatat 1080
actttaaaat aatgttatat ttatgctaaa atatgtaaat tacactatac aaccatatga 1140
taggttattt ctctaacctt gtcttctaac gttttacca aaattcataa tctaatagtt 1200
tatcagtttt caatagatta aataaaatga ttactttaaa aataataaaa tttatctaata 1260
ttaaagttga tattattttt ggccgtagt tatctattac tagtgatcag ttatactgtt 1320
ttctatagct actttattta acagcacaga tttctatgca ctttactct ttctcaacc 1380
cttgtctcta tctgtacata attgctttgt cttgatgttt ctatcaacta tatcagact 1440
atctattggt tccataactc tgtatcatgt gtattttctt attctggtat accacaaatg 1500
attcatgcaa atgaattttt ggtgattgaa aaatattaaa ttcccaattt aaagtaaaaa 1560
aaaaaaaaaa aaaaaangnc cccggggggg ggccggn 1597

```

<210> 383

<211> 175

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (95)

<223> n equals a,t,g, or c

<400> 383

```

gtgagtgggtg actatgggca tcctgtgtat atcgtgcagg atgggcccc ccagagccct 60
ccaaacatct actacaaggt atgagggtc ctctnacgtg gctatcctga atccagccct 120
tcttgggggtg ctccctccagt ttaaattcct ggtttraggg acamctstaa catct 175

```

<210> 384

<211> 2171

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (2166)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2170)

<223> n equals a,t,g, or c

<400> 384

```
agaacaagag ctggacacat taaaaagaaa gagtccatca gatttgtgga aagaagactt 60
ggctacattt attgaagaat tggaggctgt tgaagccaag gaaaaacaag atgaacaagt 120
cggacttcct gggaaaagtgg ggaaggccaa ggggaaaaaa acacaaatgg ctgaagtttt 180
gccttctccg cgtggtcaaa gagtcattcc acgaataacc atagaaatga aagcagaggc 240
agaaaagaaa aataaaaaga aaattaagaa tgaaaatact gaaggaagcc ctcaagaaga 300
tggtgtggaa ctagaaggcc taaaacaaag attagaaaag aaacagaaaa gagaaccagg 360
tacaaagaca aagaaacaaa ctacattggc atttaagcca atcaaaaaag gaaagaagag 420
aaatccctgg tctgattcag aatcagatag gagcagtgac gaaagtaatt ttgatgtccc 480
tccacgagaa acagagccac ggagagcagc aacaaaaaca aaattcaca tggatttgga 540
ttcagatgaa gatttctcag attttgatga aaaaactgat gatgaagatt ttgtcccatc 600
agatgctagt ccacctaaga ccaaaacttc cccaaaactt agtaacaaag aactgaaacc 660
acagaaaagt gtcgtgtcag accttgaagc tgatgatgtt aagggcagtg taccactgtc 720
ttcaagccct cctgctacac atttcccaga tgaaactgaa attacaaacc cagttcctaa 780
aaagaatgtg acagtgaaga agacagcagc aaaaagtcag tcttccacct ccactaccgg 840
tgccaaaaaa agggctgccc caaaaggaac taaaagggat ccagctttga attctggtgt 900
ctctcaaaag cctgatcctg ccaaaaccaa gaatcgccgc aaaaggaagc catccacttc 960
tgatgattct gactctaatt ttgagaaaat tgtttcgaaa gcagtcacaa gcaagaaatc 1020
caagggggag agtgatgact tccatatgga ctttgactca gctgtggctc ctcgggcaaa 1080
atctgtacgg gcaaagaaac ctataaagta cctggaagag tcagatgaag atgatctggt 1140
ttaaaatgtg aggcgattat tttaagtaat tatcttacca agcccaagac tgggttttaa 1200
gttacctgaa gctcttaact tcctcccctc tgaatttagt ttggggaagg tgtttttagt 1260
acaagacatc aaagtgaagt aaagcccaag tgttcttttag ctttttataa tactgtctaa 1320
atagtaccca tctcatgggc attgttttct tctctgcttt gtctgtggtt tgagtcgtct 1380
ttcttttctc tttaaaacct gattttwaag ttcttctgaa ctgtagaaat agctatctga 1440
tcacttcagc gtaaacagct gtgtttatta accatccact aagctaaaac tagagcagtt 1500
tgatttaaaa gtgtcactct tcctcctttt ctactttcag tagatatgag atagagcata 1560
attatctggt ttatcttagt ttatacata atttaccatc agatagaact ttatggttct 1620
agtacagata ctctactaca ctccagcctct tatgtgccaa gtttttcttt aagcaatgag 1680
aaattgctca tgttcttcat cttctcaaat catcagaggc cgaagaaaaa cactttggct 1740
gtgtctataa cttgacacag tcaatagaat gaagaaaatt agagtagtta tgtgattatt 1800
tcagctcttg acctgtcccc tctggctgcc tctgagctcg aatctcccaa agagagaaac 1860
caattttctaa gaggactgga ttgcagaaga ctcggggaca acatttgatc caagatctta 1920
aatgttatat tgataaccat gctcagcaat gagctattag attcattttg ggaaatctcc 1980
ataatttcaa tttgtaaaact ttgttaagac ctgtctacat tgttatatgt gtgtgacttg 2040
agtaatgtta tcaacgtttt tgtaaatatt tactatgttt ttctatttagc taaattccaa 2100
caattttgta ctttaataaa atgttctaaa cattgcaaaa aaaaaaaaaa aaaccccggg 2160
gggggncccn g 2171
```

<210> 385

<211> 2364

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (19)

<223> n equals a,t,g, or c

<400> 385

```

ggtttcaccc ctgttgccna aggctgggtct ccgaactcck tgacctcarg tgattcaccc 60
accgttggcc tcataaacct gttttgcaga actcatttat tcagcaaata tttattgagt 120
gcctaccaga tgccagtcac cgcacaaggc actgggtata tggatatccc aaacaagaga 180
cataatcccc gtccttaggt agtgctagtg tggctgttaa tatcttacta aggcctttgg 240
tatacgaccc agagataaca cgatgcgtat tttagttttg caaagaaggg gtttgggtctc 300
tgtgccagct ctataattgt tttgctacga ttccactgaa actcttcgat caagctactt 360
tatgtaaatc acttcattgt tttaaaggaa taaacttgat tatattgttt ttttatttgg 420
cataactgtg attcttttgg gacaattact gtacacatta aggtgtatgt cagatattca 480
tattgaccca aatgtgtaat attccagttt tctctgcata agtaattaaa atatacttaa 540
aaattaatag ttttatctgg gtacaaataa acagggtgcct gaactagttc acagacaagg 600
aaacttctat gtaaaaaatca ctatgatttc tgaattgcta tgtgaaacta cagatctttg 660
gaacactgtt taggtagggg gttaagactt acacagtacc tcgtttctac acagagaaag 720
aaatggccat acttcaggaa ctgcagtgct tatgagggga tatttaggcc tcttgaattt 780
ttgatgtaga tgggcatttt ttaaggtag tggtaattac ctttatgtga actttgaatg 840
gtttaacaaa agattttgtt ttgtagagat tttaaagggg gagaattcta gaaataaatg 900
ttacctaatt attacagcct taaagataaa aatccttggt gaagtttttt aaaaaaaagc 960
taaattacat agacttaggc attaacatgt ttgtggaaga atatagcaga cgtatatatt 1020
atcatttgag tgaatgttcc caagtaggca ttctaggctc tatttaactg agtcacactg 1080
cataggaatt tagaacctaa cttttatagg ttatcaaaac tgttgtcacc attgcacaat 1140
tttgcctaa tatatacata gaaactttgt ggggcatgtt aagttacagt ttgcacaagt 1200
tcattcattt tgtattccat tgattttttt tttcttctaa acattttttc ttcaaacagt 1260
atataacttt ttttagggga ttttttttta gacagcaaaa actatctgam gatttccatt 1320
tgtcaaaaag taatgrtttc ttgataattg tgtagtaatg ttttttagaa cccagcagtt 1380
accttaaacg tgaattttata tttagtaact tctgtgttaa tactggatag catgaattct 1440
gcattgagaa cctgaatagc tgtcataaaa tgaactttc tttctaaaga aagataactca 1500
catgagttct tgaagaatag tcataactag attaatgctt gtgttttagt ttaatagttt 1560
gaagtgcctg tttgggataa tgataggtaa tttagatgaa tttaggggaa aaaagttatc 1620
tgcagawatg ttgaggggcc atctctcccc ccacaccccc acagagctaa ctgggttaca 1680
gtgttttatc cgaaagtttc caattccact gtcttgtgtt ttcatgttga aaatactttt 1740
gcatttttcc tttgagtgcc aatttcttac tagtactatt tcttaatgta acatgtttac 1800
ctggaatgta ttttaactat ttttgtatag tgtaaactga aacatgcaca ttttgtacat 1860
tgtgctttct tttgtgggac atatgcagtg tgatccagtt gttttccatc atttggttgc 1920
gctgacctag gaatgttggt catatcaaac attaaaaatg accactcttt taattgaaat 1980
taacttttaa atgtttatag gagtatgtgc tgtgaagtga tctaaaattt gtaatatatt 2040
tgtcatgaac tgtactactc ctaattattg taatgtaata aaaatagtta cagtgactat 2100
gagtgtgtat ttattccatg aaatttgaac tgtttgcccc gaaatggata tgggaatactt 2160
tataagccat agacactata gtataccagt gaatctttta tgcagcttgt tagaagtatc 2220
ctttatttct aaaagggtgct gtggatatta tgtaaaggcg tgtttgctta aacttaaaac 2280
catattttaga agtagatgca aaacaaatct gcctttatga caaaaaata ggataacatt 2340
atatttttat ttctttttat caaa
2364

```

<210> 386

<211> 2864

<212> DNA

<213> Homo sapiens

<400> 386

```

gctaatagaga aagtggctct gcagaaagct ctgttatatt atgaaagcat tcatggacgg 60
ccggtaacaa agaacgaacg gcaggtgatg aagccactat acgacaggtg ccggctgggtc 120
aaacagatcc tctcccgagc taacaccata cccatcattg gttccccctc cagcaagcgg 180

```

agaagccctt tgctgcagcc aattatcgag ggcgaaactg cttccttctt caaggagata 240
aaggaagaag aggaggggtc agaagacgat agcaatgtga agccagactt catgggtcact 300
ctgaaaaccg atttcagtgac acgatgcttt ctggaycaat tcgaagatga cgctgatgga 360
tttatttccc caatggatga taaaatacca tcaaaatgca gccaggacac agggctttca 420
aatmtccatg ctgcctcaat acctgaactc ctggaacacc tccaggaaat gagagaagaa 480
aagaaaagga ttcgaaagaa acttcgggat tttgaagaca actttttcag acagaatgga 540
agaaatgtcc agaaggaaga ccgcactcct atgggtgaag aatacagtga atataagcac 600
ataaaggcga aactgaggct cctggagggtg ctcacagca agagagacac tgattccaag 660
tccatgtgag gggcatggcc aagcacaggg ggcyygcagc tgcggtgaga gtttactgtc 720
cccagagaaa gtgcagctct ggaaggcagc cttggggctg gccctgcaa gcatgcagcc 780
cttctgcctc tagaccattt ggcatcggct cctgtttcca ttgcctgcct tagaaactgg 840
ctggaagaag acaatgtgac ctgacttagg cattttgtaa ttggaaagtc aagactgcag 900
tatgtgcaca tgcgcacgcg catgcacgca cacacacaca cagtagtga gctttcctaa 960
cactagcaga gattaatcac tacattagac aacactcatc tacagagaat atacactggt 1020
cttccctgga taactgagaa acaagagacc attctctgtc taactgtgat aaaaacaagc 1080
tcaggacttt attctataga gcaaaactgc tgtggagggc catgctctcc ttggaccag 1140
ttaactgcaa acgtgcattg gagccctatt tgctgccgct gccattctag tgacctttcc 1200
acagagctgc gccttccctca cgtgtgtgaa aggttttccc cttcagccct caggtagatg 1260
gaagctgcat ctgcccacga tggcagtgca gtcacatct tcaggatgtt tcttcaggac 1320
ttcctcagct gacaaggaat tttggtccct gcctaggacc gggctcatctg cagaggacag 1380
agagatggta agcagctgta tgaatgtga ttttaaaacc aggtcatggg agaagagcct 1440
ggagattctt tcctgaacac tgactgcact taccagtctg attttatcgt caaacaccaa 1500
gccaggctag catgctcatg gcaatctgtt tggggctggt ttggtgtggc actagccaaa 1560
cataaagggg cttaagtcag cctgcataca gaggatcggg gagagaaggg gcctgtgttc 1620
tcagcctcct gagtacttac cagagttaa tttttttaa aaaaatctgc actaaatcc 1680
ccaaactgac aggtaaatgt agccctcaga gctcagccca aggcagaatc taaatcacac 1740
tattttcgag atcatgtata aaaagaaaaa aaagaagtca tgctgtgtgg ccaattataa 1800
tttttttcaa agactttgtc acaaaactgt ctatattaga cattttggag ggaccaggaa 1860
atgtaagaca ccaaactctc catctcttca gtgtgcctga tgtcacctca tgatttgctg 1920
ttactttttt aactcctgcg ccaaggacag tgggttctgt gtccacctt gtgctttgcg 1980
aggccgagcc caggcatctg ctgcctgcc acggctgacc agagaagggtg cttcaggagc 2040
tctgccttag acgacgtgtt acagtatgaa cacacagcag aggcaccctc gtatgttttg 2100
aaagttgcct tctgaaaggg cacagtttta aggaaaagaa aaagaatgta aaactatact 2160
gacccgtttt cagtttttaa gggctgtgag aaactggctg gtccaatggg atttacagca 2220
acattttcca ttgctgaagt gaggtagcag ctctcttctg tcagctgaat gttaaggatg 2280
gggaaaaaga atgcctttaa gtttgcctt aatcgtagg aagcttgagc tatgtgttg 2340
aagtgcctg gttttaatcc atacacaaag acggtacata atcctacagg tttaaatgta 2400
cataaaaata tagtttgga ttctttgctc tactgtttac attgcagatt gctataattt 2460
caaggagtga gattataaat aaaatgatgc actttaggat gtttcctatt tttgaaatct 2520
gaacatgaat cattcacatg accaaaaaatt gtgttttttt aaaaatacat gtctagtctg 2580
tcctttaata gctctcttaa ataagctatg atattaatca gatcattacc agttagcttt 2640
taaagcacat ttgtttaaga ctatgttttt ggaaaaatac gctacagaat ttttttttaa 2700
gctacaaaata aatgagatgc tactaattgt tttggaatct gttgtttctg ccaaaggtaa 2760
attaactaaa gatttattca ggaatcccca tttgaatttg tatgattcaa taaaagaaaa 2820
caccaagtaa gttatataaa ataaaaaaaa aaaaaaaaaa tcga 2864

<210> 387

<211> 2683

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (40)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2649)

<223> n equals a,t,g, or c

<400> 387

acgccttccc	cgaggtgtac	gacaagatct	gcaaggccgn	cagactgags	ctggagccccg	60
cctggagaga	cagacacgtg	tgagtgggtca	ggcatcttcc	cttcactcaa	gcttggctgc	120
tttcctagat	ccacactttc	aaagagaaac	ccctccagaa	ctcccaccct	gacagcccaa	180
caccaccttc	ctcctggctt	ccagggggca	gcccagtgga	atggaaagaa	tgtgggattt	240
ggagtcagac	aagcctgagt	ccagttcccc	gtttagaact	cattagctgt	gtgactctgg	300
gtgagtccct	taaccctctc	gagcccggt	ctcttcatta	gttgaaagg	atagtaatac	360
ctacttgtag	gtygttgtca	tctgagttga	gcactgggtca	cattgaaggt	gctgggtaag	420
tggtagctct	tggtgcttcc	cgttcagcgt	cacatctgca	gtggagcctg	aaaaggctcc	480
acattaggtc	acctgtgcac	agccatggct	ggaatgatga	aggggatacg	ctggagttgc	540
cctgccatcg	cctccatcag	ccagacgagg	tcctcacagg	agaaggacag	ctcttcccca	600
ccctgggac	tcaggagggc	agccacggag	ggggaggccc	cagatgcgct	gtgccaagc	660
caggtccgag	gccaaagtcc	tccttgccat	ccttgggtgcc	gtcctgcccc	ttcctccttc	720
atgcctgggc	ctgcaggcac	cccagccacc	actgagttca	ctcggagtgc	cctgtgttcc	780
tggaagagg	attccagggt	tgaatcttgt	cccagcctca	gcctgggaca	cctaggtgga	840
gagagtgtgc	tcgctctga	attggatcca	ggggacctgg	gctcattctt	cctggctcac	900
caaccctgca	ggcctcatct	ttcccaaaac	ccactttgtc	ttggtgggag	tgggtccgcg	960
ctgctctgca	gcaggcggt	ggggagtgga	cagcatcagg	tgggaaagt	gagtccaccc	1020
tcagtgttct	gtaggattct	caccgtgggg	ctggaagaaa	agagcatcga	cttgatttct	1080
ccaaccactc	atccctcttt	ttctttcttc	caccactccc	caccccagct	gtagttaatt	1140
tcagtgcctt	acaaatccta	agctcagaga	aagttccatt	tcctgtccag	agggaaggga	1200
acctccctag	gtccttccct	ggcttggtat	aacgcaaagc	ttggttggtt	atgcaactct	1260
atcttaagaa	ctgcccagcc	tcagctgaaa	acccgaatct	gagaagggaat	tgcgtcatgt	1320
aagggaagct	ggaattaagg	gagctgagcc	agtcattggt	gtggcgtgtg	agtcaggaga	1380
cctaggtttc	agcccctctc	tactgtcagc	gagctgtgca	acgtgggcaa	gtcattgtcc	1440
tctgagctgc	agtttctctc	tctgtcacat	cgctacagac	aagacctccc	tggaaacctt	1500
ctgattgtct	tagacactgt	ggttgcaaaa	cccacggaaa	gcctcatttg	tgtggaaagt	1560
cagaggaaaa	atgatccagt	ggacacttgg	ggattatctg	tcattcaaga	tccttccttc	1620
aacccaagg	ycagctccca	tctcatttcc	agaaaggctc	atacctggct	tgcagggaag	1680
catctgtctt	gtcattccag	gtgccagaat	cctctcagag	tcattgaagg	gtgttcaccc	1740
atcccacca	aggcttggca	cactgccagt	gtcttagcag	ggtcttgtga	gggctggggg	1800
catccaggca	ctcagaaggc	aaaggaacca	ccctacccat	ttggcctctg	gagggggcag	1860
aagaaagaaa	gaaacctcat	cctatatattt	acaaagcatg	tgaattcttg	cattagctct	1920
cataggagac	ccatgtgctt	ccttgctcag	tgcaaaactg	atgattctac	ttgctgtaga	1980
tgaatggtta	acacgagcta	gttaaacagt	gccattgttt	tgccagtga	gcctccaacc	2040
ctaagccact	gggacggtgg	ccagagatgc	cagcagcctc	tgctgccctt	agtcataata	2100
ccaaaatcca	gaccttatcc	acaaccggg	gcttggaag	gaaggatttt	tggaaatcaca	2160
ccctccggtt	atgttgctcc	agtaaaatct	tgcttggaag	gaggcagctc	tcttagcatg	2220
gtgagctgag	ttcatggctt	ttttttgtag	ccagtcctgt	ccctggccat	ccatgtgatg	2280
gttttgatg	gagttaaact	tgatgccagt	gggcagtgca	tgtggaaagt	atcagagtaa	2340
gsctctcccc	tccagagccc	tgagtttctt	ggctgcatga	aggttttctt	tagaatcaga	2400

325

```
attgtagcca gtttcttttg ccagaaggat gaatacttgg atattactga aagggagggg 2460
tggagatggg tgtggcagtg tatggtgtgt gattttttatt ttcttctttg gtcattgggg 2520
ccaaggagaa aggcattgaat cttccctgtc aggcctcttac ascacaggca ctgtgtctac 2580
tgtctggaag acatgtcccc gtggctgtgg ggccgctgct tctgtttaaa taaaagtggc 2640
ctggaarmna aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 2683
```

<210> 388

<211> 1446

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (35)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (37)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (57)

<223> n equals a,t,g, or c

<400> 388

```
aagaactaaa acgactcact atagggaata actananacg cctgacagga aaccggnccg 60
gaattcccggt gtcgaccacac gcgtccgaar argaggtgga ggargagggt gatgttgata 120
gtgatgaaga agaggaggaa gatgaggaga gctcctcgga gggcttgagg gctgaggact 180
gggcccagggt agtagtgagg gccggtggca gcttcggggc ttatggtgcc caggaggaaag 240
cccagtgtccc tactctgcat ttcttggaag gtggggaggga ctctgattca gacagtgagg 300
aagaggacga tgaggaagag gatgatgaag atgaagacga cgatgatgat gaggaggatg 360
gtgatgaggt gcctgtaccc agctttgggg aggccatggc ttactttgcc atggtcaaga 420
ggtacctgac ctcttccccc attgatgacc gcgtgcagag ccacatcctc cacttggaac 480
acgatctggt tcatgtgacc aggaagaacc acgccaggca ggccgggagtt cgaggtcttg 540
gacatcaaaag ctgagtcact ggacctagct gtgccccaa cctagattgg cagcaccacc 600
ccagggcaga ggactctctg ggcacccgct gtgcatggag ccagagtga gagccccaga 660
tccttttagta atgcttcccc tggctcctgca acaggcccggt tcacctcggt cgggcccggg 720
gctgaggtca gcctcactgc ctgcttattg cctctttctc agaatcctct ttctcccca 780
tttgggccctg ggctcagggt accagggtggg gcgggtgggg agctgtccgg tgctaccaca 840
ccgtgccctc agtggactaa ccacagcagc agccagggtat gggccctgga ggttcccggc 900
cggagagtgc ctctccctc tgccatccac gtcaggctctt tgggtggggg accccaaagc 960
cattctggga agggctccag aagaagggtcc agcctaggcc ccctgcaagg ctggcagccc 1020
ccacccccac cccccaggcc gccttgagaa gcacagttta actcactgcg ggctcctgag 1080
cctgcttctg cctgctttcc acctccccag tccctttctc tggccctgtc catgtgactt 1140
tgcccttggt tttctttcc agattggagg ttccaagag gccccccacc gtggaagtaa 1200
ccaaggcgcg tccttgtgg gcagctgcag gcccctgccc tctctccct ctctggcagg 1260
gccccatcct gggcagagggt gcctgggggt gggcccagag tccagccgtc cagctgtctc 1320
tttcccagtt tgatttcaat aaatctgtcc actccccttt tgtgggggtg aacgttttaa 1380
cagccaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1440
```

aaaaaa

1446

<210> 389

<211> 723

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (705)

<223> n equals a,t,g, or c

<400> 389

```

gggcaagacc tcatgcctaa aaaataaaga gaaagcagag taaaactgga ctctgagata 60
ygactaaagt tctgtgtgat acgtgtgcct tathtagctc aagacattcc tggagcacct 120
ataaaaactg acttgtaatc caggctatgt ctcttttttag cttcgtaatc tttggcaagg 180
ccattggatt cttcagctgt acaattagga gactcgatca ggtgattgcc tttctcagct 240
gtcagttctc taatttcagg cttggtagct tgtaggaact gaaattgcaa ttaaaacctt 300
tataaactca aactaaatca tgaattacag aaaaagtcca ttcttccaaa acttgatgtt 360
accacactta caagtttaaa atatgaagtc gactgtttaa aggattctgc atatattcta 420
gtgtgcacat tcagaaacat ttttcttgga aaaagtaccc aacatttttt ataactgcac 480
atattaattt attgccagaa taaattgcat tgcattgctaa ataaagtcag ataattcaaa 540
tccatttgct tttatgtagt ttttcttcta aatgtcaaca ttttggaatt aaaatgttta 600
tggttttata tgagggtagg aaatcttaac tgctttgggg ggtattgttt ataggctttt 660
tgttatgggg ccggtagttt tttaataggg ggattgcccc tttcnaccgt ttggggggccc 720
ggg                                              723

```

<210> 390

<211> 1046

<212> DNA

<213> Homo sapiens

<400> 390

```

cgggtcgacc caccgctccg gtccaccaca ggcaccgcag ctcatctacc aggaatatgt 60
gaaccagcca gatgttcggc cccagccccc ttcgccccga gagggccctc tgcctgctgc 120
ccgacctgct ggtgccactc tggaaagggc caagactctc tcccaggga agaattgggt 180
cgtcaaagac gtttttgcct ttgggggtgc cgtggagaac cccgagtact tgacacccca 240
gggaggagct gcccctcagc cccaccctcc tctgccttc agcccagcct tcgacaacct 300
ctattactgg gaccaggacc caccagagcg gggggctcca cccagcacct tcaaagggac 360
acctacggca gagaacccag agtacctggg tctggacgtg ccagtgtgaa ccagaaggcc 420
aagtccgcag aagccctgat gtgtcctcag ggagcagga aggcctgact tctgctggca 480
tcaagagggt ggagggccct ccgaccactt ccagggggaa ctgccatgcc aggaacctgt 540
cctaaggaac cttccttcct gcttgagttc ccagatggct ggaaggggtc cagcctcggt 600
ggaagaggaa cagcactggg gagtctttgt ggattctgag gccctgccc atgagactct 660
agggtccagt ggatgccaca gcccagcttg gccctttcct tccagatcct gggactgaa 720
agccttaggg aagctggcct gagaggggaa gcggccctaa gggagtgtct aagaacaaaa 780
gcgacccatt cagagactgt ccctgaaacc tagtactgcc ccccatgagg aaggaacagc 840
aatgggtgtc gtatccaggc tttgtacaga gtgcttttct gtttagtttt tacttttttt 900
gttttgtttt tttaaagatg aaataaagac ccagggggag aatgggtgtt gtatggggag 960
gcaagtgtgg ggggtccttc tccacacca ctttgtccat ttgcaaatat attttggaaa 1020
acaaaaaaaa aaaaaaaaaa aaaaaa                                1046

```

<210> 391
<211> 699
<212> DNA
<213> Homo sapiens

<400> 391
cggatggggc gtaggtgggc ggtgygccc cagctacctg ggtaaggccc aagatggctg 60
tcttcgcctt agtactcgtg tgaagttggc ggggacgggt cctgtcatct tcttgggctt 120
atttggtgtg ctgttgaagg ggggagacta gagaaatggc agggaaacctc ttatccgggg 180
caggtaggcg cctgtgggac tgggtgcctc tggcgtgcag aagcttctct cttggtgtgc 240
ctagattgat cggataaagg ctcactctcc cgcccccaa agtggttgat cgttggaaacg 300
agaaaagggc catgttcgga gtgtatgaca acatcgggat cctgggaaac ttgaaaagc 360
accccaaaga actgatcagg gggcccatat ggcttcgagg ttggaaaggg aatgaattgc 420
aacgttgtat ccgaaagagg aaaatggttg gaagtagaat gttcgctgat gacctgcaca 480
accttaataa acgcatccgc tatctctaca aacactttaa ccgacatggg aagtttcgat 540
agaagagaaa gctgagaact tcggaaaagg ctcatctgtc accctggaga agggaaactg 600
tacttttccc tgtgaggaaa cggttttgta ttttctctgt aataaaatgg ggcttctttg 660
gaaaaaaaa aaaaaaaaa aaaaaaaaa aagtcgacc 699

<210> 392
<211> 1545
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (24)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (25)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (54)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (58)
<223> n equals a,t,g, or c

<400> 392
taccggtccg gaattcccgg gtcnnccac gcgtccgcgc actgccgccg ccgnttcngc 60
ccggactcgg acgcgtggta gccccaggat gggtaggttc aacgagaaga agacaacatg 120
tggcaccgtt tgcctcaagt acctgctgtt tacctacaat tgctgcttct ggctggctgg 180
cctggctgtc atggcagtgg gcactctggac gctggccctc aagagtgact acatcagcct 240
gctggcctca ggcacctacc tggccacagc ctacatcctg gtgggtggcg gcactgtcgt 300


```
catggtgact ggggtcttgg gctgctgcgc caccttcaag gagcgctcga acctgctgcg 360
cctgtacttc atcctgctcc tcatcatctt tctgctggag atcatcgctg gtatcctcgc 420
ctacgcctac taccagcagc tgaacacgga gctcaaggag aacctgaagg acaccatgac 480
caagcgctac caccagccgg gccatgaggc tgtgaccagc gctgtggacc agctgcagca 540
ggagttccac tgctgtggca gcaacaactc acaggactgg cgagacagtg agtggatccg 600
ctcacaggag gccggtggcc gtgtggtccc agacagctgc tgcaagacgg tgggtggctct 660
ttgtggacag cgagaccatg cctccaacat ctacaagggtg gagggcggct gcatacccaa 720
gttgagagacc ttcattccagg agcacctgag ggtcattggg gctgtgggga tcggcattgc 780
ctgtgtgcag gtctttggca tgatcttcac gtgctgcctg tacaggagtc tcaagctgga 840
gcactactga ccctgccttg ggcttggctg ctgctgcacc caactactga gctgagacca 900
ctgagtacca ggggctgggc tccctgatga caccaccctt gtgccatcac cataacctct 960
ggggacccca acctcagagg cagcttcaag tgctttttgc tgcgcaccaa tgcccagcag 1020
gggaggtgag gggggctggc ggggcgaagt ttgggggggtg ttttgtggg ctccccggac 1080
atactctctg cctggtggtc agatgcagggt tgggaaggggc cttgctgagt ggcgcaaggc 1140
cgagcgttcc cagcaggggg agaaacctt cacacccag gcccttcagg aactggggct 1200
ttgccttgca gccacatggc cccatcccag ttggggaagc caggtgagct ctgacccttg 1260
ggcctgggccc tctgcccctc ccaaccacgc cgtcgtctcc ctgcacagcg cccctgctgt 1320
cttccccacc gcagtcacca ccaccgaaa tgccacgtgg tcaactgtgca ctgccctgtt 1380
catgtgcctc tgcggggcag ggcttccctg gttttgtaca ctgctgtacc cagatgccta 1440
caaccatccc tgccacatac aggtgctcaa taaacacttg tagagcagaa aaaaaaaaaa 1500
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 1545
```

<210> 393

<211> 749

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (490)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (748)

<223> n equals a,t,g, or c

<400> 393

```
gcttgagccc aggagttctg ggctgttagt gcgctatgcc gatcgggtgt ccgcactaag 60
ttyggcatca atatggtgac ctcccgggag cggrggacca ccaggttgcc taaggagggg 120
tgaaccggyc caggctcgaa acggagcagt tttccttgag cggagattca ggtttttcag 180
gtgggtctgg tgagctgggg tctttacaac ccctgccttg gctctgctga caaaaactcc 240
cgcaaaaggc cccctcgtag caaggctccg ccgccacgag actttcacat caatctcttc 300
cgcatgcagc cctggctgag gcagcacctg ggggatgtcc tgaatttttt acccctctag 360
ccatggccac tgagccctct gctgccctgc cagaatctgc cgccctcca tcttctacct 420
ctgaatggcc acccttagac cctgtgatcc atcctctctc ctgactgagt aaatccgggt 480
ctctaggatn ccagaggcag cgcacacaag ctgggaaatc ctcagggctc ctaccagcag 540
gactgcctcg ctgccccacc tcccgtcctt tggcctgtcc ccagattcct tccctgggtg 600
acttgactca tgcttgtttc actttcacat ggaatttccc agttatgaaa ttaataaaaa 660
tcaatggttt ccacaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 720
aaaaaaaaaa aaaaaaaaaa aaaaaaana 749
```

<210> 394
<211> 611
<212> DNA
<213> Homo sapiens

<400> 394
gcgcggcggc ggcgggggtg ctggggccggc ggcggcgggc gtacgaggcg cgcgctcggg 60
gtcccggtcg cgaggaggag gaggatgtgg cgcgcggagg ggaaatggct gccgaaaaca 120
agccggaaga gcgtttccca aagtgtattc tgcggaacta gcacctactg tgttctcaac 180
accgtgccac ctatagaaga tgatcatggg aacagcaata gtagtcatgt aaaaatcttt 240
ttaccgaaaa agctgcttga atgtctgccg aaatgttcaa gtttaccaa agagaggcac 300
cgctggaaca ctaatgagag atcatgatgc agccgtcctt ttggatttct ttttaataat 360
gtgtgacctt tcacctttga tcccctgacc tgcattacct tggttaacct ttcatttttt 420
aatttaattt cattttttta ttttggtgta caagctgtaa catttcatct ttcaaagtgt 480
aacacgctga tttcctcaaa tagagatacc cctttgagtg ataaatttgc aaaatgctgt 540
cttcattttc tgtattaaaa ttcatttcag ttttaaaata aagtgtaatc tgtgttttca 600
tccttttaaa a 611

<210> 395
<211> 1856
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (1851)
<223> n equals a,t,g, or c

<400> 395
gttggcgcgc ggtgcgcggt gcgtagtctg gagctatggt ggtggtggca gccgcgccga 60
accgcggcca cgggaccctt aaagttctgc ttctgtcggg gcagcccgc tccgccggcg 120
gagccccggc cgccaggcc ctgccgctca tggtgccagc ccagagaggg gccagcccgg 180
aggcagcgag cggggggctg ccccaggcgc gcaagcgaca gcgcctcac cacctgagcc 240
ccgaggagaa ggcgctgagg aggaaactga aaaacagagt agcagctcag actgccagag 300
atcgaaagaa ggctcgaatg agtgagctgg aacagcaagt ggtagattta gaagaagaga 360
acaaaaaact tttgctagaa aatcagcttt tacgagagaa aactcatggc cttgtagttg 420
agaaccagga gttaagacag cgcttgggga tggatgccct ggttgctgaa gaggaggcgg 480
aagcaagggg aatgaagtga ggccagtggc cgggtctgct gagtccgcag cactcagact 540
acgtgcacct ctgcagcagg tgcaggccca gttgtcacc ctccagaaca tctccccatg 600
gattctggcg gtattgactc ttcagattca gagtctgata tcctgttggg cattctggac 660
aacttgacc cagtcattgt cttcaaagtgc cttccccag agcctgccag cctggaggag 720
ctcccagagg tctaccaga aggaccagt tccttaccag cctccctttc tctgtcagtg 780
gggacgtcat cagccaagct ggaagccatt aatgaactaa ttcgttttga ccacatatat 840
accaagcccc tagtcttaga gataccctct gagacagaga gccaaagctaa tgtggtagt 900
aaaatcgagg aagcacctct cagccccctc gagaatgatc accctgaatt cattgtctca 960
gtgaaggaag aacctgtaga agatgacctc gttccggagc tgggtatctc aaatctgctt 1020
tcacccagcc actgccccaa gccatcttcc tgcctactgg atgcttacag tgactgtgga 1080
tacgggggtt ccctttcccc attcagtgc atgtcctctc tgcttggtgt aaaccattct 1140
tgaggagaca cttttgccaa tgaactcttt cccagctga ttagtgtcta aggaatgatc 1200
caatactgtt gcccttttcc ttgactatta cactgcctgg aggatagcag agaagcctgt 1260

```
ctgtacttca ttcaaaaagc caaaatagag agtatacagt cctagagaat tcctctatatt 1320
gttcagatct catagatgac ccccaggtat tgtcttttga catccagcag tccaagggtat 1380
tgagacatat tactggaagt aagaaatatt actataattg agaactacag cttttaagat 1440
tgtactttta tcttaaaagg gtggtagttt tccctaaaat acttattatg taagggtcat 1500
tagacaaatg tcttgaagta gacatggaat ttatgaatgg ttctttatca tttctcttcc 1560
cccttttttg catcctggct tgccctccagt tttaggctct ttagtttgct tctgtaagca 1620
acgggaacac ctgctgaggg ggctctttcc ctcatgtata cttcaagtaa gatcaagaat 1680
cttttgtgaa attatagaaa tttactatgt aaatgcttga tggaattttt tcctgctagt 1740
gtagcttctg aaagggtgctt tctccattta tttaaaacta cccatgcaat taaaagggtac 1800
aatgcaaaaa aaaaaaaaaa aaaaaaaacc ggggggsgcc ccggaaccaa nttccc 1856
```

<210> 396

<211> 2651

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (45)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (47)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2642)

<223> n equals a,t,g, or c

<400> 396

```
gtcacgagcg agggggtgcg tgtgaggtca tcgcgcgggc gggcntncgg ggtctggcgg 60
tttgaacgag acgaagacgg aaccggagcc ggttgcgggc agtggacgcg gttctgccga 120
gagccgaaga tggcagtgaa cgtatactca acgtcagtgga ccagtataaa cctaagtcga 180
catgacatgc tggcctggat caatgagtct ctgcagttga atctgacaaa gatcgaacag 240
ttgtgctcag gggctgcgta ttgtcagttt atggacatgc tgttccctgg ctccattgcc 300
ttgaagaaag tgaaattcca agctaagcta gaacacgagt acatccagaa cttcaaaata 360
ctacaagcag gttttaagag aatgggtggt gacaaaataa ttctgttgga caaattagta 420
aaaggaaagt ttcaggacaa ttttgaattc gttcagtggt tcaagaagtt tttcgatgca 480
aactatgatg gaaaagacta tgaccctgtg gctgccagac aagggtcaaga aactgcagtg 540
gctccttccc ttgttgctcc agctctgaat aaaccgaaga aacctctcac ttctagcagt 600
gcagctcccc agaggcccat ctcaacacag agaaccgctg cggctcctaa ggctggccct 660
ggtgtggtgc gaaagaaccc tgggtgtggc aacggagacg acgaggcagc tgagttgatg 720
cagcaggtca acgtattgaa acttactgtt gaagacttgg agaaagagag ggatttctac 780
ttcggaaagc tacggaacat tgaattgatt tgccaggaga acgaggggga aaacgaccct 840
gtattgcaga ggattgtaga cattctgtat gccacagatg aaggctttgt gatacctgat 900
gaagggggcc cacaggagga gcaagaagag tattaacagc ctggaccagc agagcaacat 960
cggaattctt cactccaaat catgtgctta actgtaaaat actccctttt gttatcctta 1020
gaggactcac tggtttcttt tcataagcaa aaagtacctc ttcttaaagt gcactttgca 1080
gacgtttcac tccttttcca ataatgttga gttaggagct tttaccttgt agcagagcag 1140
```

tattaacayc tagttggttc acctggaaaa cagagaggct gaccgtgggg ctcacatgc 1200
ggatgcgggt cacactgaat gctggagaga tggtatgtaa tatgctgagg tggcgacctc 1260
agtggagaaa tgtaaagact gaattgaatt ttaagctaata gtgaaatcag agaattgtgt 1320
aataagtaaa tgccttaaga gtatttataaa tatgcttcca cttttcaaaa tataaaatgt 1380
aacatgacaa gagatttttg gtttgacatt gtgtctggga aggaagggcc agaccttgga 1440
acctttggaa cctgctgtca acaggtctta cagggctgct tgaacctca taggcctagg 1500
ctttggtcta aaaggaacat ttaaaaagtt gccctgtaaa gttatttggg gtcattgacc 1560
aattgcatcc cagctaaaaa gcaagaggca tcgttgacct gataatagag gatgtgtttc 1620
agccctgaga tggtacagtt gaagagcttg gttttcattg agcatttctc tatttttcca 1680
gttatccccg aaatttctat gtattatatt ttttggggaa gtgaggtgtg cccagttttt 1740
taatctaaca actacttttg gggacttgcc cacatctctg ggatttgaat ggggattgta 1800
tcccatttta ctgtctttta ggtttacatt taccacgttt ctcttctctg ctccccctgc 1860
ccactgggga ctctcttttg gctccttgaa gtttgctgct tagagttgga agtgcagcag 1920
gcaggtgatc atgctgcaag ttctttcttg acctctggca aaggagtggt tcagtgaagg 1980
ccatcgttac cttgggatct gccaggctgg ggtgttttcg gtatctgctg ttcacagctc 2040
tccactgtaa tccgaatact ttgccagtgc actaatctct ttggagataa aattcattag 2100
tgtgttacta aatgttaatt ttcttttgcg gaaaatacag taccgtgtct gaattaatta 2160
ttaatattta aaataattca ttctttaact ctccctcatt tgctttgccc acagcctatt 2220
cagttccttt gtttggcagg attctgcaaa atgtgtctca cccactactg agattgttca 2280
gcccctgatg tatttgtatt gatttgtttc tgggtgtagc ttgtcctgaa atgtgtgtag 2340
aaagcaagta ttttatgata aaaatgttgt gtagtgcatt ctctgtgtgg aattcagagg 2400
aaaaccaga ttcagtgatt aacaatgcca aaaaatgcaa gtaactagcc attgttcaaa 2460
tgacagtggg gctattttct ttttgtggcc ttttagactt ttgttgccct aaaattccat 2520
tttattggga acccattttc cacctggtct ttcttgacag ggtttttttc tactttaaac 2580
agtttctaaa taaaattctg tatttcaaga gtaaaaaaaa aaaaaaaggg gggccsccca 2640
angggaccca a 2651

<210> 397

<211> 2507

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (2489)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2496)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2504)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2505)

<223> n equals a,t,g, or c

<400> 397

```
ggctgcccga ctggctgtgg aaatgaaaac tgatctcttg attgttcttt cagatgtaga 60
aggccttttt gacagccccc caggttcaga tgatgcaaag cttattgata tattttatcc 120
cggagatcag cagtctgtga catttggaac caagtctaga gtkggaatgg gtggcatgga 180
agccaagggtg aaagcagccc tctgggcttt gcaagggtggc acttctgtwg twattgccaa 240
tggaaccacac ccaaagggtgt ctgggcacgt catcacagac attgtggagg ggaagaaagt 300
tggtaccttc ttttcagaag taaagcctgc aggcctact gttgagcagc agggagaaat 360
ggcgcgatct ggaggaagga tgttgccac cttggaacct gagcagagag cagaaattat 420
ccatcatctg gctgatctgt tgacggacca gcgtgatgag atcctgttag ccaacaaaaa 480
agacttggag gaggcagagg ggagacttgc agctcctctg ctgaaacgtt taagcctctc 540
cacatccaaa ttgaacagcc tggccatcgg tctgcgacag atcgcagcct cctcccagga 600
cagcgtggga cgtgttttgc gccgcacccg aatcgccaaa aacttggaac tggaacaagt 660
gactgtccca attggagttc tgctgggtgat ctttgaatct cgctctgact gtctacccca 720
ggtggcagct ttggctatcg caagtggcaa tggcttgta ctcaaaggag ggaaggaggc 780
tgacacagc aaccggattc tccacctcct gaccaggag gctctctcaa tccatggagt 840
caaggaggcc gtgcaactgg tgaataccag agaagaagt gaagatcttt gccgcctaga 900
caaatgata gatctgatca ttccacgtgg ctcttcccag ctggtcagag acatccagaa 960
agctgctaag gggattccag tgatggggca cagcgaaggg atctgtgcac atgtatgtgg 1020
attccgaggc cagtgttgat aaggtcacca ggctagtcag agactctaaa tgtgaatatc 1080
cagctgcctg taatgctttg gagactttgt taatccaccg ggatctgctc aggacaccat 1140
tatttgacca gatcattgat atgctgagag tggaacagggt aaaaattcat gcaggcccca 1200
aatttgcttc ctatctgacc ttcagcccct ccgaagtga gtcactccga actgagtatg 1260
gggacctgga attatgcatt gaagtagtgg acaacgttca ggatgccatt gaccacatcc 1320
acaagtatgg cagctcccac acggatgtca tcgtcacaga ggacgaaaac acagcggagt 1380
tcttcctgca gcacgtagac agtgctgtg tggtctggaa tgccagcact cgcttttctg 1440
atggttaccg ctttgactg ggagctgaag tgggaatcag tacatcgaga atccacgccc 1500
ggggaccagt aggacttgag ggactgctta ctactaagtg gctgctgcga gggaaggacc 1560
acgtggtctc agattttctc gagcatggaa gtttaaaata tcttcatgag aacctcccta 1620
ttcctcagag aaacaccaac tgaaaagagc caggaaaacc cgggaatttt ccaaagggtc 1680
ttcacgttaa acttgtctta tctcaggaga gagcccgctc ttgtctccca gttcctggta 1740
gggtctgcct gttgaaagt gtacctggat gcttctgggc tccgtttggc aatagcartc 1800
ttggctgatg tgcacagtct ggctcccagc tcaccctttt tttttaagt aagaaaatag 1860
ttgctaccga tagggacttt gccaaagtcca attatcttct aggattgaaa ggtgcatttt 1920
ccccataaaa aaggcgagga aaacccatgg ctgctttgtg tcacctcagt gacttacagt 1980
cccccttggc atttagttgg tactagagcc agtcatcctt aacaaatctt ttcacatttt 2040
atttctttca catgtagtca tcttcaaaaa ggaaagattt ggaatttttag aaaaggggca 2100
actcttcttt ttagcattct catcagaaag tcacaaaaat cgatggaatc atttccactg 2160
ggaagattga cttttgtat ttatttgtgg ggtaaattaa taagcattcc agatgcttgc 2220
agcttcctgc atccaggaga tgctgtgttc cccgtgatgc agctggaacc caagctgcag 2280
caggagatgc aagtttcagg atgttcccca ctgagctgga ggaatatcta cagcagtgat 2340
gcttgaaatt tttgtatgaa ttattttgtc gtccctacct tttcctccaa aacaaaaatt 2400
agaggattat ttaataactt tggaattctt cccctttttt gagaaataaa gttttttatg 2460
aaaagccaaa aaaaaaaaaa aaaaagggng ggcggnctag aggnncc 2507
```

<210> 398

<211> 1273

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature
 <222> (1227)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (1229)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (1252)
 <223> n equals a,t,g, or c

<400> 398

```

ggcacgagtg gagtagctgg gattacagat ttccagaagc tgttctgtca ataacaaagt 60
ctcaragaaa accacaaaac caccaacact aagatcattc ttgagtccaa tttgaaaaac 120
taggggtcaag ttctgcagag gcattgaaag gacaagaaac caccctgata cccatcgtgt 180
gagggaaaaat gctctattca ccattcctca gcttctgctt ctggtttcag agttctctct 240
atattggagg gtgtttttaa gctagagtgg tctttatcca cttttattaa cacatctgaa 300
tgtgaagggtc aagagaggaa agtgatatgt cctaagtcag agtagagtca acaagaaaaat 360
aagacaaaaca gcgactgagc ccctgggtgta tactgggcat tggccagcta ctggggatat 420
ggagatgaag aaaacataac ccttcttcaa ggagcccaac ctaccaaggt agacagacat 480
atagacaaat agatacttgc atagaaaaaa agaggaaaag gggatcagtg tgacctgtgt 540
aactaagtac cctataaaacc ctctgcaac agatcatatt gccctttata gtggggatgg 600
taatcccatc tgaattccac aggtactttg cagtcatacc acacccatgt gtctgtcggg 660
cctgactgta ccattttata acagcttcac ttccagcagt tctcagccct cttaagctag 720
ggtcattgtc agtagggata ctgcttcata agcaccagca gaacaccaa ggagaccata 780
tggttgaaag caaccagcac tgccctggcg ctctcataggt tcttagagtt tttatctttt 840
actttcagtc taacacagca ctgcctgctt tttgtttttg ttgcttggtt tgtttttttc 900
ttaccgtgtt caccaaactt gtgtccaaat agctttgggc tgatgcaaaa atatctatgt 960
ggaagagaag agttgttctc atggagggcc ttcagatgag tgctatagac tctctaggca 1020
actccaagag gcttctcaag caggggtggc agtgagagct gctatggaat caatggacaa 1080
actgacaggg actgctttga aagacagtac tcagttgagt atatatattc tctcttaagg 1140
gctaaaagtt tataatcatc ccttaaacac tctgtgatgg gatcttcagg atcatctttt 1200
gaagtaaact atattttaca atgtganana aaaaaaaaaa aaaaaaaaaa tncctgcgggtc 1260
cgcaagggaa ttc                                     1273

```

<210> 399
 <211> 3774
 <212> DNA
 <213> Homo sapiens

<400> 399

```

gacgcaaaga gtcgcggcgc catttgctgc cgccgagcgt ggacgcaggc ggatctctga 60
agagctgggt cgccagcctc tccgcgcac gttgcctggc ctccagcacc tacttgggtcc 120
cgcgcgctcc ctctgtctgc ccctcggagc agcagccgcc gcggtcgccg ctacccggaa 180
agaagtcaga gacgcgcgca ggtcgcgcgc accgccatgc ccaagaataa aggtaaagga 240
ggtaaaaaca gacgcagggg taagaatgag aatgaatctg aaaaaagaga actgggtattc 300
aaagaggatg gtcaggagta tgctcaggta atcaaaatgt tgggaaatgg acggctagaa 360
gcaatgtgtt tcgatggtgt aaagaggtta tgtcacatca gaggaaaaatt gagaaaaaag 420

```

```

gtttggataa atacctcgga cattatTTTT gttggtctcc gagactacca ggataacaaa 480
gctgatgtaa ttttaaaata caatgcagac gaagctagaa gtctgaaggc atacggcgag 540
cttccagagc atgctaaaat caatgaaact gatacatttg gtcctggaga tgatgatgaa 600
attcagtttg atgacattgg agatgatgat gaagatattg atgacatcta aattgaactc 660
aacattttac attccatctt ttctgaagat tgtcctacaa tttggatttt gatcatgaca 720
aagaagatta aaatttcatt agcatgaatg caatttggtt aagcagactg atttgtttct 780
aagatatttt tgggtttttt aaaactgata ataatgctga attatcttaa gtgagatgtt 840
aagcccactt tgttcttttt atgtaatgga gcttatgggt agaagaccat gtctactaat 900
tacaaaaaaa aaaaaaaacc atgcattgct gcttttccta ccacttccag taagaaaatg 960
ggtgttttga agaaatcatt tgccttgtcc tcacggaatc tgattaagcc ctggcctctt 1020
gattgtatag agtcattgtg tatattccag ttacctagat attcccttga gattttgata 1080
caatttgagg gaggcagaag tctgcakttg aagaaaaaaa ataagtctgt ttgtcatatt 1140
taagtagcct gtggctatatt ttatactgat ttgatataca tgttcttttc atagtcgtat 1200
tttgccaccg taacataaaa aaaaaaaaaa aagatttcca aaatgccgtt ttcagaacct 1260
gggttttaat agcagtattg aatttgtaag cttagtagtt gcagaaattg aacactaggt 1320
ggcactcagt tatcttaaca ggggaagtac tgatacaatt gttgactttt cttttactat 1380
gtgtaagaaa taccocaaac atgaaaagat tgttttgatc atatgcatgt atgtagaata 1440
tttttgcaga gcagaaagat tatgttagaa gtgtgatttt tattttcaga agtcataatc 1500
atgtaagcta caattttgag tgctttataa acacttaaga tatatatata aattttaatt 1560
tcatagcaac ttgtaaaaaa taaataactt gttgaaaagc ctttttcaac atatccctaa 1620
gctaaggga gaggaaaggaa taacaactca gtgaaaagat ggtctccagt ttctgaatga 1680
aaaagctaca gctgagaaat aaaataaaat gtcatgctgc agaatatgtt atacccttat 1740
tttggttaa ggatatattt tattatgtga atggttttgt ttttgttttt tgtttttgtt 1800
tttgcttgtt attggaattt agctttactg gtaacttcct tatttagttt ttagtggtca 1860
actctaataa aatgaaacta gggctgagct agttagccct cactagccaa actgaaactc 1920
tatgcaacat taaaagaaga gatccatcat gtagcttggt acacttttat tttattagtc 1980
accggggaac ttttcagtga tgaaaataca cagggttaata aaccttcaca tggcttcaaa 2040
agggaaaaca gcaaatcttc tctaactctac tcttactata atttcctaag tgtacaccaa 2100
actctggatt taaaaatctg aagtactata gaacattaag ttgaagaatg gaaattaaga 2160
gtacgtattc atgggtttata tttcttattc tatggagttc gtgaacacat ctagggtgaa 2220
tgcatctgag actaagggtt ggtttttaat cctcataaga aaccagcctt gaagaattaa 2280
caattctctt cattggtatt ctaaacctcc taagatattt aggcctctgt acataaaagt 2340
gtttttgcta aatttacagt atatatagat ctttcatat tattttacta agaatgtttg 2400
aactttgcat atttgatata gttcctggta ggaatagcac agctcaaaca ttagtttttc 2460
tacttacctc ctctaacacg tgggttgtct ggagagtttc taaaaattca gctataacct 2520
cagttcatgt atttactggt gattgttctt gctgaggtag taacagccca atcttgggct 2580
gttaaatcct aggaaatctc gaatcatagt gattaaaata gttggggtaa agttgtagct 2640
tatatgcaat actacttgga ggaattcttc tactaatttg tatttaattg ggaaattgta 2700
tagtttcatt gatttaatca taaataatgg aaatggtctc caagaagttt ttttttcat 2760
ttttttgctt atacactctg attcctataa tacagtgcta taagctatgc acagaaaata 2820
aaatgtttga aatccaagaa taatggttct tactgctaag agggagtaat agttattact 2880
aatgattttg attgggttgc atttttgttg caatgtttat tccacttgca gttagaatat 2940
gaatatgttt tatcactagt gtggctaaat aaccaaacat ttgtgtaaaa aaaaaaaaaa 3000
gccaagattt cattgtttgt tgaatatttc ttaagcatct ggcccctaaa gagaccgctt 3060
cttaccaagc ctgtaaacta tgcattgatg aaattcttgt attttattta ggaatggctg 3120
ttggtttact caccacatct gtggaatcat ggctataaat gtttgcttac aaactctttg 3180
tgacttgtaa tttaaactaa tctcatctaa tgtaaatatt agattatgat gttcagtaac 3240
atcttccata ggtataaact gctgtcatta ttgatttcag agtaactctg agtaatcaa 3300
taggtaaaag catgttttga gtaaaatagc tagatttata ctttacttgt atacagactt 3360
aacaacaacc ggtattgact ggattgacag ctaaaagtatc agaataagaa caagggtttt 3420
ttgatgttac ctgactgtca taaagatgaa ratgatttgt atkggtatga matgcttatc 3480

```

tttatctack tcgtaagggt arggtaatta acgctgtgac tccacgaact tgccactgca 3540
tggtgtttgg ttccctacat caccctttac ttcgctttct ctatctgaaa gcgaaggaaac 3600
gcagcctccg taatgcagca attggaggat ggggtcgcc taccagctc cagggggtgg 3660
gacattggcg agatgtgggt cccgttgccg ccggcaggac tgttctgcac tagggacacc 3720
catgggattt aatggccaca gaaagctcct tggagaacgg accgggcccg tttt 3774

<210> 400

<211> 1522

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (479)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1471)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1481)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1487)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1501)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1508)

<223> n equals a,t,g, or c

<400> 400

gcgccgtgt cttttcagtc sgcgctgagt gggttttcgg atcatgtctg gtggctccgc 60
ggattataac agagaacatg gcggcccaga gggaatggac cccgatgggtg tcatcgagag 120
caactggaat gagattgttg ataactttga tgatatgaat ttaaaggagt ctctccttcg 180
tgcatctat gcttacggtt ttgagaagcc ttccgctatt cagcagagag ctattattcc 240
ctgtattaaa gatccaaaag gtaattcttg cacttggaga ctatatggga gccacttgtc 300
atgcctgcat tgggtggaaca aatgttcgaa atgaaatgca aaaactgcag gctgaagcac 360
cacatattgt tgttggtaca cccgggagag tgtttgatat gttaaacaga agataccttt 420
ctccaaaatg gatcaaaatg tttgttttgg atgaagcaga tgaaatgttg agccgtggnt 480
tttaaggatc maatctatga gattttccaa aaactaaaca caagtattca ggttgtgttg 540


```

ctttctgccca caatgccaac tgatgtgttg gaagtgacca aaaaattcat gagagatcca 600
attcgaattc tgggtgaaaaa ggaagaattg acccttgaag gaatcaaaca gttttatatt 660
aatggtgaga gagaggaatg gaagttggat acactttgtg acttgtaga gacactgacc 720
attacacagg ctgttatattt tctcaatacag aggcgcaagg tggactggct gactgagaag 780
atgcatgccca gagacttcac agtttctgct ctgcatgggtg acatggacca gaaggagaga 840
gatgttatca tgaggggaatt ccggtcaggg tcaagtcgtg ttctgatcac tactgacttg 900
ttggctcgcg ggattgatgt gcaacaagtg tctttgggta taaattatga tctacctacc 960
aatcgtgaaa actatatattc cagaattggc agaggggggtc gatttgggag gaaagggtgtg 1020
gctataaaact ttgttactga agaagacaag aggattcttc gtgacattga gactttctac 1080
aatactacag tggaggagat gcccatgaat gtggctgacc ttatttaatt cctgggatga 1140
gagttttgga tgcagtgtc gctgttctc aataggcgat cacaacgtgc attgtgcttc 1200
tttctttggg aatatttgaa tcttgtctca atgctcataa cggatcagaa atacagattt 1260
tgatagcaaaa ggcagcttag tcgtgagctc ttgtgaggaa agtcattggc tttatcctct 1320
ttagagttag actggtggg tgggtataaa agatgggggtc tgtaaaatct tyytttctta 1380
gaaatttatt tcctagttct gtagaaatgg ttgtattaga tgttctctat catttaataa 1440
tatacttgtg gactaaaaga tataagtgt ntataaaaatc nggcccatt atgtttaaat 1500
ntcagatnac ccttaatcaa at 1522

```

<210> 401

<211> 1370

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1223)

<223> n equals a,t,g, or c

<400> 401

```

agcccttctt gccccagctg cagaccactt tcaccaaagc cctgcaggac tccaaccggg 60
gggtgcgcct gaaggcgag atgctctggg gaagctcatt tccatccaca ttaagggtga 120
ccccctcttc acagagctgc tcaatggcat ccgcgccatg gaggaccag gtgtcagga 180
cacattgctg caggccctga ggtttgtgat tcagggagca ggggccaaag tggatgccgt 240
catccggaaa aacatcgtct cactcctgct gagcatgctg ggacacgatg aggacaacac 300
tcgcatctcc tcagccgggt gcctagggga actgtgtgcc tttttgactg aagaggagct 360
tagtgccgtt ctacagcagt gcttctggc ggacgtgtcc ggcattgact ggatgggtcg 420
gcacggggcg agctggcact ttccgtggct gtgaatgtgg ctctggcag actttgtgcc 480
ggcagatata gcagtgatgt tcaggaaatg atcctgagca gtgccacggc ggacaggatc 540
cccattgcgg tgagcggggc ccggggcatg ggctttctca tgagacacca catcgagaca 600
ggcggagggc agttgccggc caaactttcc agcctgttcg ttaagtgtct gcagaaccca 660
tccagcgaca tcaggctggg ggctgagaag atgatctggg gggcaaataa ggacccactg 720
cctccccctg acccccaggc catcaagccc atcctgaagg ctcttcttga caacaccaag 780
gataagaaca ccgtggtcag ggcctacagc gaccaggcaa ttgtcaacct cctcaagatg 840
cggcaggggt aagagggtgt tcagtccctc tccaagatcc tggatgtggc cagtttgag 900
gtgctgaacg aggttaaccg aagtcctga agaagctggc cagccaggcc gactccacgg 960
agcaggtgga cgacaccatc ctgacatgag aggcctgggc cagcagcagc attgccgtc 1020
cacatctttg ctcaatgttt tcatttttga aaatacatat gttccaatgg ggagcttga 1080
agatggcggt cccagaaagt attttaatat caatagacca cagccaaagc cttaaatcaa 1140
accacacac aactgaaaat tgccctctcc atctctcacc ttttctgtg gagaagagaa 1200
ggaaaagcac acgcatgcgc ctncagcaa tggcagccca ggagctgtt gtccakttta 1260
ggcatggcta ggtctgggaa ctattaatag gcagggtcag aytktggggc tcctctctc 1320

```

ctgtgcttga gctctgggtt gagagctggc gctaccaacc ttttcttat

1370

<210> 402

<211> 1412

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (51)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1406)

<223> n equals a,t,g, or c

<400> 402

ttatataaag atctatcaag gtgaagaatt accacatccc aaatccatgt nacaggccac 60
agcagaagct aacaatttag cagccgtggc aactgccaaag gacacataca acaaaaaaat 120
ggaagagatt tgtggtggtg acaaaccatt tctggcccca aatgacttgc agaccaaaca 180
cctgcaactt aaggaagaat ctgtgaagct attccraggg gtgaagaaga tgggtgggga 240
agaatttagc cggcgttacc tgcagcagtt ggagagtga atagatgaac tttacatcca 300
atatatcaag cacaatgata gcaaaaatat cttccatgca gctcgtaccc cagccacact 360
gtttgtagtc atctttatca catatgtgat tgctgggtgtg actggattca ttggtttgga 420
catcatagct agcctatgca atatgataat gggactgacc cttatcacc tgtgcacttg 480
ggcatatatc cggactcttg gagaataaccg agagctggga gctgtaatag accaggtggc 540
tgcagctctg tgggaccagg ctttgtacaa gctttacagt gcagcagcaa cccacagaca 600
tctgtatcat caagctttcc ctacaccaa gtcggaatct actgaacaat cagaaaagaa 660
aaaaatgtaa tgcaattttt aagaaataca ggtgcatgac caattgtcaa ttaaattatc 720
agttttatgt ctccatgcaa acattcaaag tgcttccatc agaacggagt aaaatactaa 780
acacctctga agactgcaaa ctggattagt tcttttactt cagtgtttta taagcagatg 840
tatgtatgca tggttatact attttgttta catgtacaat ttcctgattt ttcttcaaaa 900
atgctgttat aaagtatttg tctatttatg ataacagtac acgtgttctg cttgaattta 960
ctaaattcta ctactgggtt ataattaaat catgtgatat tccacgtttg gatatgctca 1020
tttaatttct acagaaaaaa ttttaaatta tttcacatta gccatttggt aaaacacagc 1080
atcataactc agcaggctgg atttaatctg tatcatctta tatatatcac aatcttattt 1140
ttaagcacat tttagagttc cttagttgct ttatcaaaaa ccagatattg cttttacatg 1200
gtttaataga atataaacct cttgataaaa aatgcacaaa aaatcacttt gtatatgtga 1260
gtttcactgc attgtatatt ttttcatttg gtacacaaag aatgtattct tcatagggtt 1320
attcttttaa tatgtgaact attattaaag ttactctgg ttcctaagat taaaaamaaa 1380
aaaaaaaaaa aaaaaaaaaa aaaaanaaaa aa 1412

<210> 403

<211> 1750

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (2)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (40)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (44)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (70)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (107)

<223> n equals a,t,g, or c

<400> 403

tngtgtcca	ccgcggtgga	ggaccgctcc	tagcaactan	tggntcccc	gggcctgtca	60
ggaattcggg	cagtgggcat	ggcgactttt	tctggcccg	ctgggcnaat	cctgtcgctt	120
aatccgcaga	agatgtcgag	tttcaaaagg	aggtggcgca	ggttcgcaag	cgcataaccc	180
agcgaaaaaa	acaagaacaa	cttactcctg	gagtagtcta	tgtgcgccac	ctacctaac	240
tacttgacga	aaccagatc	ttttcatatt	tctccagtt	tggcactgtg	acacggttca	300
ggctgtccag	aagtaaaagg	actggaaata	gcaaaggcta	tgcatttgtg	gagtttgagt	360
ctgaggatgt	tgccaaaata	gttgctgaaa	caatgaacaa	ctacctgttt	ggtgaaagac	420
tcttgagtg	tcattttatg	ccacctgaaa	aagtacataa	agaactcttt	aaagactgga	480
atattccatt	taagcagcca	tcatatccat	cagtgaacg	gtataatcg	aatcggacac	540
taacacaaaa	gctacggatg	gaggagcgat	ttaaaaagaa	agaaagatta	ctcaggaaga	600
aattagctaa	aaaaggaatt	gactatgatt	ttccttcttt	gattttacag	aaaacggaaa	660
gtatttcaaa	aactaatcgt	cagacgtcta	caaaaggcca	ggttttacgt	aagaagaaga	720
aaaaagtttc	aggtactctt	gacactcctg	agaagactgt	ggatagccag	ggccccacac	780
cagtttgtac	accaacattt	ttggagaggc	gaaaatctca	agtggctgaa	ctgaatgatg	840
atgataaaga	tgatgaaata	gttttcaaac	agcccatatc	ctgtgtaaaa	gaagaaatac	900
aagagactca	aacacctaca	cattcacgga	aaaaaagacg	aagaagcagc	aatcagtgat	960
tttcaatgta	ttatatttct	tttgaaaaat	ataatatatt	tatgagagtg	gactttgtat	1020
ttcactaggt	acaatggaat	acaacctttg	acaagatttt	cagaggaaaa	atacactgtt	1080
tggtaaggt	aaggaaagca	gtgtgtaatt	ttggattgcc	tgcccttggc	tgaaatacag	1140
gggtgcatac	cagcttgcat	tggttggt	gacattgcct	ctttgtcctg	gcctctagtt	1200
ttcttttgat	atttcatagc	tctccttagt	ttactctgcc	tgatagaaa	gttgaccact	1260
aactgcaggt	ttaagtacta	aaytgagcc	tttctgtcg	ccagcaatta	aagaccacca	1320
atcttgtttg	tccatctaca	tggtttgtcg	gggacattta	actcatggag	gtgctttaga	1380
tttcaacatc	agatggttga	agctggaagt	ttaattatat	gtagagtga	aaggcagttc	1440
cagtttttagc	acagatttgt	ttatgtgttc	agattttaat	agagattcaa	aatgactca	1500
tttttaccaa	taatgttaaa	ttagttttgg	ttgtgctagc	atgaattaat	aaccaccatt	1560
ttataccagt	atcatcagtg	aagaattgta	tttcaagatt	caaacaataa	ccagcaatta	1620
aacttttttc	tacaatgtat	ttgtttgcga	gtaggacttg	ggagtcattg	ggaaaaaaaa	1680

ataataaatt ttcccccttca ttaacgaatt cagactcatt aaaaacattg ccatcagaaa 1740
 aaaaataaaaa 1750

<210> 404

<211> 1339

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (150)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1330)

<223> n equals a,t,g, or c

<400> 404

atttcaggga aatgaagatg gaatttgaag gtcactttta aaattaagtc attgatgctg 60
 ctgttacaga gtgtgacaga ggatccatgt ctgtgacaca ggacggtggg aagcctgaga 120
 gagagtgaat ttatgtgata cactgaaatn acttttgttt ttcttctaac tcatacaaaa 180
 ctggtttgga aagtctttgc tttggaagcg tcagacatta gaacaggcca aactggactg 240
 tctgttcata gcgtgcctga ataagaagcg ctcttaggga gccagaggga gcagagtggg 300
 cgtgtcctgc gtgctcttca ccctctgggg cgcccctgct gcggctggca ggtgcagaca 360
 gcctttgctg gtccccagca cgtccagggt ggggtgctcc ttgcccagca gaaccatccc 420
 cactgtgagg ctgtgagaga tttgtggcag gaactgttta tgaggctcta gttgttgctg 480
 ttgtggcggg aaagttaaga aacatagccc ttaaggaaac cacctttatg tattttctta 540
 aagcacgcct ttaaataagc aaaaacttta aaaggcagga aagagaattc ttaggcaaat 600
 tcagagaaat aagtgttagt taataactaat cacctcctcc tctgtctctc atcctccttt 660
 ctcccatcaa agcaaaatat ggctcacca ccagcccaa atcagtgtc agaccctctc 720
 tgtgtctgtg tgccctcctg ggagtcagtc agcgctcagg ccaggactgt gcagggccag 780
 ccagcccatg cgctagtcag gagcacaggc aaggggtgct tgtggcagtg gccgggcacc 840
 tgagccccag ctcgttgta aacgtgctga cggcaagggg caatggagtg agtttcccaa 900
 ctaagaaacc actattatat attttlyccc ttcagtcaca tagacttcag acaactctcc 960
 tattttttat ggatttttca gtcattttca gatgaaggaa ctaagtcatt gtgaactgtc 1020
 tcttgagatc taaaaacaag atgacttttc ctggcacata ttccaaagca aagactttgt 1080
 tgcctgctgc ttattgtcta atttacaggg atatttaatt ttgtcaggtc tatgtatat 1140
 tatccagcta tacttacttg cacagtggat tggagagaaa ggattctcca gtgtgcacac 1200
 tcatcggtac tctttctgca tttccctcgt gctgtgtccc gctcgggttc caatggacag 1260
 tatcagggtc tgtttgactt aggtctttca gttttccttt cggttccctt ttaaaaatgt 1320
 gattgttaan ctgcctctt 1339

<210> 405

<211> 482

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (440)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (469)

<223> n equals a,t,g, or c

<400> 405

```
cttgggtatc ggctattgcc tgagtgtgct agagtccctcg aagagtaact gctgacctta 60
ttcactggct gtgggcctta tggcacagtc agtcaccagg ttagagacat gcttcacatt 120
cacctaccca caaactagtg gatgataaat tttggctatt cagaagacgt ttattatagg 180
agtatgtaga ttttccatag agtgctgtta tgtgacttga attttagtct cggccctgcc 240
tctgacattg tcggtgggtt atcctgggtc caggaaataa gactagcctt ttcctcatga 300
tagtctttgg tggtttttaa aacagttggt taagtcaaca gatgtatcat atgcctgaca 360
ctgctctaca ccagtgaata atttacctc taataggggg tggttaactat aaagatgata 420
aacatagcat cttaattggn gtgtgtatga aggtgggtgt tacctcttnc tagccaccca 480
gg 482
```

<210> 406

<211> 1413

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (9)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (24)

<223> n equals a,t,g, or c

<400> 406

```
ctggtgctnc accgcggtgt cggnccgctc tagcaactag tggatccccc gggcctgcag 60
ggaattcggc acgaggtttg gtgggggttac acgcgggttc aacatgcgta tcgaaaagtg 120
ttatttctgt tcggggccca tctatcctgg acacggcatg atgttcgtcc gcaacgattg 180
caaggtgttc agattttgca aatctaaatg tcataaaaac tttaaaaaga agcgcaatcc 240
tcgcaaagtt aggtggacca aagcattccg gaaagcagct ggtaaagagc ttacagtggg 300
taattcattt gaatttgaaa aacgtagaaa tgaacctatc aaataccagc gagagctatg 360
gaataaaaact attgatgcga tgaagagagt tgaagaaatc aaacagaagc gccaagctaa 420
atttataatg aacagattga agaaaaataa agagctacag aaagttcagg atatcaaaga 480
agtcaagcaa aacatccatc ttatccgagc ccctcttgca ggcaaaggga aacagttgga 540
agagaaaatg gtacagcagt tacaagagga tgtggacatg gaagatgctc cttaaaaaatc 600
tctgtaacca tttcttttat gtacatttga aaatgccctt tggatacttg gaactgctaa 660
attattttat tttttacata aggtcactta aatgaaaagc gattaaaaga catctttcct 720
gcattgccat ctacataata tcagatatta cggatgtagg attgcatctc agtggttaaat 780
ctttactgat agatgtactt aagtaaatca tgaaaattct acttgtaact atagaagtga 840
attgtggacg taaaatgggt gtgctatatt gataatggca ctaggcagca tttgtatagt 900
aactaatggc aaaaattcat ggctagtgat gtataaaaata aaatattctt tgcaagtaaaa 960
tattcccttt gttaatgtta tagaaggggg gatacaaaaa ggaactaaca atttgtatgg 1020
```

cagtgtcaga tatttttatt ttagtatttc ctgttttggg ttattttgcat cttagaagag 1080
cataatgaca ttgtttgatg aagcctaatt atgctggact gttttgacct ggtttaaccc 1140
ttctgatagg tagttgtgga tgctggggat gagaactgaa taatctttgc ctggagtgc 1200
actacactct agaatttcca ctttgagaa tactcagttc caacttgtga ttcctgatag 1260
aacagacttt acttttctag ccagcattg atctagaagc agaggaatcc cagcgccttt 1320
taaaagttgt tatgtggttt tcttttaaaa agctcctgtt tttggaaagt agaatttatg 1380
ggtacctcgg ccgcgaccac gctaagccga att 1413

<210> 407

<211> 1693

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1548)

<223> n equals a,t,g, or c

<400> 407

tgggctgtcc ggcccactcc cctgggagcg cgaagcgktg gaccagggcg gccatgtccc 60
gccctcgcat gcgcctggtg gtcaccgagg acgactttgg ttactgcccg cgacgcgatg 120
agggtatcgt ggaggccttt ctggccgggg ctgtgaccag cgtgtccctg ctggtcaacg 180
gtgcggccac ggagagcgcg gcggagctgg cccgcaggca cagcatcccc acgggcctcc 240
acgccaacct gtccgagggc cggcccggtg gtccggcccg ccgtggcgcc tcatcgctgc 300
tcggccccga argcttcttc cttggcaaga tgggattccg ggaggcggtg gcggccggag 360
acgtggattt gcctcagggt cgagaccgca gctacaggag gatgctcgcg aggaccccc 420
gagctccgcc cggaggtact gtgaggcgt tagagctggc ggtggatgac ttccgcattc 480
aaacactgga gccatcacac ggaagcacga ggagggtatc ctccggcagct actcccggtc 540
gctcaagggt tctctcgctc gccctctagg tgcgggagga gctcgaggcc caactaagct 600
gcttccggga gctgctgggc aggcycacac gcacgcggac gggcaccagc actgcacgtr 660
ckcycagggt cgtggttagt gatcccagtt tggaggcggt tactcccagg cggggetggg 720
ggagtakggg aagttcgatg cccccagggt aaaggacgtg ctctccctg acccgctccg 780
cccgcaggcg tgtgccagggt gttcgccgag gcgctgcagg cctatggggg gcgctttacg 840
cgactgccgc tggagcgcg tgtgggtggc tgcacttggc tggaggcccc cgcgcgtgcc 900
ttcgccctgc ccgtggagcg cgacgcccgg gccgcggtg gcccttctc ccgccacggc 960
ctgcggtgga cagacgcctt cgtgggcctg agcacttgcg gccggcacat gtccgctcac 1020
cgcggtgccg gggccctggc gcgggtcctg gaagtaccct agcggggccac accctgacag 1080
ccgagctgat ggcgcacccc ggctaccca gtgtgcctcc caccggcggc tgcggtgaag 1140
gccccgacgc tttctcttgc tcttgggagc ggctgcatga gctgcgcgtc ctcaccgcgc 1200
ccacgctgcg gggccagctt gcccaggatg gcgtgcagct ttgcgccctc gacgacctg 1260
actccaagag gccaggggag gaggtccct gtgagccac tctggaacct ttcctggaac 1320
cctccctact ctgacccct acagacaacc aagcactaat ccccttagta ccaagaaagg 1380
ggagccagga ttagtcctg gcccagccca gagctgggac ctggagcacg atctgttgac 1440
ttccctgggt aggacactgc cacctctggg ctcaggctct catgcctcca aatggcatct 1500
agagtttgag cagccttctt ggctgcaggc aggcctagcc tgtggcancg ggctagggcc 1560
cgagagcat ttggtgcccc tccatgttgc aatgcaaaca ccttcaccac tggggcagtg 1620
gggagagatg gctatattaa taaaataacg tgtgtctttc aaaaaaaaaa aaaaaaaaaa 1680
tcgagacagt tct 1693

<210> 408

<211> 1342

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (107)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1332)

<223> n equals a,t,g, or c

<400> 408

```
caggaaaaat ctggagattt acgaggctgt gacgtccccc cagggccccg ccatgacctg 60
gagcatgttt gctgtgggct ggatggagct gaaggacgca tgcgggnccc ggggcctcct 120
ggacaggagc tttgccaaca tggctgaacc cttcaagggtg tggacggaga atgcagacgg 180
gtcaggcgct gtgaacttcc tgacaggcat gggggggcttc ctgcaggcgg tggctcttcgg 240
gtgcacgggg ttcagrgtsa gcgtctccgg catcttctac caggggmacr agctcaactt 300
ctstttttcc gaggactccg tgaccgtgga ggctcacagct cgagcagggc cctgggctcc 360
tcacctggag gctgagctgt ggccatccca gtcccggctc tccctgttgc caggacacaa 420
gggtctcctt ccccgctcgg ctggccggat acaaattgtca ccccgaagc tgcttggaa 480
ttccagctcc gagttccctg ggaggacttt ttcagatgtt agggaccgcg tccagagccc 540
cctctgggtc accctgggtt cctccagccc caccgagtca ctactgttg accctgcctc 600
tgaataatca ggaacggttg cttcagagac gtctcttggg ccttccctct ggccacgtct 660
gcacccaccc ctcttgggca ccctcctagc ctgccatccc tcacctgcag ccaggctctc 720
agggaaggtc catgctgctt ggcttgagtt caaggctttc tgctgttagc ctggactccc 780
gtggaccccc gtgggcagggt ggcttccccg tggcatctcc acaccgcctc tgcttcccc 840
tgtggactga tgctatcgcg caccgtccca cgacccacc cagagctcct gaagccgggg 900
tctgagcctg catcacctct ggctctcat cccccactct cctgagagca gtggtcacag 960
cggccggccg ctctgctgag aaggcagaga ggcaggctca ggcctcagcg tggacagcag 1020
ggataagggg cacgaaggac ggggactcgg ccccttcaga attcctcagg actctcaggt 1080
gcagctttgc caaaaaggaa cttttcatgt catgcagttg aggggactta gtctcaatcc 1140
caggctcctc ttgactctgg gcagcyttrt cttgggcagc tcwgccccag ggttcggtcg 1200
tcagcagttt cccaagaaca agatgtgatg gcactctgct ctgaaaccct gatgaggacc 1260
aggccccctg caccgctgtc agcctgagga attaaagctt tgggtgctggg aaaaaaaaaa 1320
aaaaaaaaaa anaaaaaaaa ca 1342
```

<210> 409

<211> 2417

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (107)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (680)

<223> n equals a,t,g, or c

<400> 409

```
aaaaaaaaa aaaaaaacca aacacaaaga gagcaatttt gggccaacag ttaccattca 60
agcctggccc tttaggccag cccagtccac gggctctgag tgtggangct gcgtagcacc 120
aggaagcggc tctgctgagg ttcaaggggc cccagcacag tgtggcatcc gttcagcttt 180
tggttggtcc aggatggtgg ggagccaggc ctcggggcct cggagcaacc acccgagcag 240
acggagtaca cggagcagcg gcccggcccc cgccaacgct gccgccggga tgctccagac 300
cttgatgat tacttctggt gggaacgtct gtggctgcct gtgaacttga cctgggccga 360
tctagaagac cgagatggac gtgtctacgc caaagcctca gatctctata tcacgctgcc 420
cctggccttg ctcttcctca tcgttcgata cttctttgag ctgtacgtgg ctacaccact 480
ggctgccctc ttgaacataa aggagaaaac tcggctgcgg gcacctcca acgccacctt 540
gggaacattt ctacctgacc agtggaagc agcccaagca ggtggaagta garcttttgt 600
ccggcgagar cgggcttytc tggccggcag taragcgttg gttccgtcgc cgccgcaacc 660
aggaccggcc cagtctcctn caagaagttc cgagaagcca gctggagatt cacattttac 720
ctgattgcct tcattgccgg catggccgtc attgtggata aacctgggtt ctatgacatg 780
aagaaagtth gggagggata tcccatacag agcactatcc cttcccagta ttggtactac 840
atgattgaac tttccttcta ctggtccctg ctcttcagca ttgctctga tgtcaagcga 900
aaggatttca aggaacagat catccaccat gtggccacca tcattctcat cagcttttcc 960
tggtttgcc aattacatccg agctgggact ctaatcatgg ctctgcatga ctcttccgat 1020
tacctgctgg agtcagccaa gatgtttaac tacgcgggat ggaagaacac ctgcaacaac 1080
atcttcatcg tcttcgccat tgtttttatc atcaccgcac tggtcatect gcccttctgg 1140
atcctgcatt gcacctggt gtacccactg gagctctatc ctgccttctt tggctattac 1200
ttcttcaatt ccatgatggg agttctacag ctgctgcata tcttctgggc ctacctcatt 1260
ttgcgcatgg ccacaaagtt cataactgga aagctggtag aagatgaacg cagtgaccgg 1320
gaagaaacag agagctcaga gggggaggag gctgcagctg ggggaggagc aaagagccgg 1380
cccctagcca atggccaccc catcctcaat aacaaccatc gtaagaatga ctgaaccatt 1440
attccagctg cctcccagat taatgcataa agccaaggaa ctaccgyct ccctgcgcta 1500
tagggtcact ttaagctctg gggaaaaagg agaaagttag aggagagttc tctgcatcct 1560
ccctccttgc ttgtcaccca gttgcttta aaccaaattc taaccagcct atccccaggt 1620
agggggacgt tggttatatt ctggttagagg gggacggtcg tattttcctc cctaccgccc 1680
aagtcacctt ttctactgct tttgaggccc tccctcagct ctctgtgggt aggggttaca 1740
attcacattc cttattctga gaatttgccc ccagctgttt gcctttgact ccctgacctc 1800
cagagccagg gttgtgcctt attgtcccat ctgtgggcct cattctgcca aagctggacc 1860
aaggctaacc tttctaagct ccctaacttg ggccagaaac caaagctgag cttttaactt 1920
tctccctcta tgacacaaat gaattgaggg taggaggagg gtgcacataa cccttaccct 1980
acctctgcca aaaagtgggg gctgtactgg ggactgctcg gatgatctt cttagtgtca 2040
cttctttcag ctgtccctgt agcgacaggt ctaagatctg actgcctcct ctttctctg 2100
gcctcttccc ccttccctct tctcttcagc taggctagct ggtttggagt agaattggca 2160
ctaattctaa tttttattta ttaaataattt ggggttttgg ttttaaagcc agaattacgg 2220
ctagcaccta gcatttcagc agagggacca ttttagacca aaatgtactg ttaatgggtt 2280
tttttttaaa attaaaagat taaataaaaa atattaaata aaacatggca ataagtgtca 2340
gactattagg aattgagaag ggggatcaac taaataaacg aagagagtct ttcttaaaaa 2400
aaaaaaaaa aaaaaaa 2417
```

<210> 410

<211> 1401

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1394)

<223> n equals a,t,g, or c

<400> 410

```
ttgtgtatat tgttgacatc tgataatttg tgcaatttta tttttaactt aaaagatggg 60
aaccaacaaa tgtgccagcc aggcaggtat gacagcttac gggactagga ggcattctta 120
tgatcccaaa atgcaaactg acaaaccctt tgaccagacc acaattagtc tgcagatggg 180
cactaataaa ggagccagcc aggcagggat gttagcacca ggtaccagaa gagacatcta 240
tgatcagaag ctaacattac agccggtgga caactcgaca atttccctac agatgggtac 300
caacaaagtt gcttcccaga aaggaatgag tgtgtatggg cttgggcggc aagtatatga 360
tcccaaatac tgtgctgctc ctacagaacc tgtcattcac aacggaagcc aaggaacagg 420
aacaaatggt tcggaaatca gtgatagtga ttatcaggca gaataccctg atgagtatca 480
tggcgagtac caggatgact accccagaga ttaccaatat agcgaccaag gcattgatta 540
ttagatccac acagaaggag ctcatgtatt agtcctttgt ttttattcag tgagaaccaa 600
gctagccttg agtaattttt atcttgtctt cctaaaacac tattaagctt attgtacttt 660
taagaaaaat tgccttacgt acattccttt ttcctttttc tgcctcttcc ctcaatagtt 720
gccttttagt gctgtaatat ttaaactcta cagcataatc aataactcgc atatgaagta 780
aaaaggaata ctgtgaaagg ggagtactct tgtacagcca gttcttttat gcaaaaatct 840
atgcattttt acaatcttat attaaactgg tattttcaaa caataggaaa cttttttttt 900
ttttttttta cagtttagtg tatctgggtt ctacatggaa gactaaactc atgcttattg 960
ctaaatgtgg tctttgccaa ctaaatttaa gatgcagcat tttagaaatt tacatatcaa 1020
tgtttctaca gtattgtttg ctaattttta aataaagtca tgatcagtggt gcatttgtga 1080
ttatatgtgt actcattctc ttacctagcg aacaagatct tttcagagtg gtgtttctaa 1140
aagagcatgt acaaaagtgg cctgtggaca tttaggcctg ggtgatgcat ttgctcttcc 1200
tgtttgtgcc aatgtatcaa tgtagagttg ctctgttttc ttcaactgta tttattgctg 1260
catttctcag cataaactta tcccattgta tttttataaa ataaatattt tttttgaact 1320
ttmaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1380
aaaaaaaaaa gggnggccgt t 1401
```

<210> 411

<211> 3016

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (399)

<223> n equals a,t,g, or c

<400> 411

```
cggaccgctt cccccgagcc agcagcggtt gacgtcatcg tgcgtgtggt gccctgctg 60
ccggggctgg tgattggagg aaaccccggtg tctgcggacg gctgtagcct gtgagcagcg 120
agatccaggg acagagtctc agcctcgccg ctgctgccgc cgccgccgcc cagagactgc 180
tgagcccgtc cgtccgccgc caccacccac tccggacaca gaacatccag tcatggataa 240
aaatgagctg gttcagaagg ccaaactggc cgagcaggct gagcgatatg atgacatggc 300
agcctgcatg aagtctgtaa ctgagcaagg agctgaatta tccaatgagg agaggaatct 360
tctctcagtt gcttataaaa atggtgtagg agcccgtagg tcactcttga gggtcgtctc 420
aagtattgaa caaaagacgg aaggtgctga gaaaaaacag cagatggctc gagaatacag 480
agagaaaatt gagacggagc taagagatat ctgcaatgat gtactgtctc ttttggaata 540
gttcttgatc cccaatgctt cacaagcaga gagcaaagtc ttctatttga aaatgaaagg 600
```

```
agattactac cgttacttgg ctgagggttg cgctggtgat gacaagaaa ggattgtcga 660
tcagtcacaa caagcatacc aagaagcttt tgaaatcagc aaaaaggaaa tgcaaccaac 720
acatcctatc agactgggtc tggcccttaa ctctctctgtg ttctattatg agattctgaa 780
ctccccagag aaagcctgct ctcttgcaaa gacagctttt gatgaagcca ttgctgaact 840
tgatacatta agtgaagagt catacaaaga cagcacgcta ataatgcaat tactgagaga 900
caacttgaca ttgtggacat cggataccca aggagacgaa gctgaagcag gagaaggagg 960
ggaaaattaa cgggccttcc aacttttgtc tgcctcatte taaaatttac acagtagacc 1020
at ttgtcctc catgctgtcc cacaatagt tttttgttta cgatttatga caggtttatg 1080
ttacttctat ttgaatttct atatttccca tgtggttttt atgtttaata ttaggggagt 1140
agagccagtt aacatttagg gagttatctg ttttcatctt gaggtggcca atatggggat 1200
gtggaatttt tatacaagtt ataagtgttt ggcatagtac ttttggtaca ttgtggcttc 1260
aaaagggcca gtgtaaaact gcttccatgt ctaagcaaa aaaactgcct acatactggg 1320
ttgtcctggc ggggaataaa agggatcatt ggttccagtc acaggtgtag taattgtggg 1380
tactttaagg tttggagcac ttacaaggct gtggtagaat catacccat ggataccaca 1440
tattaaacca tgtatatctg tggaatactc aatgtgtaca cttttgacta cagctgcaga 1500
agtgttcctt tagacaaagt tgtgacccat tttactctgg ataagggcag aaacggttca 1560
cattccatta tttgtaaagt tacctgctgt tagctttcat tatttttgct acactcattt 1620
tatttgtatt taaatgtttt aggcaaccta agaacaaatg taaaagttaa gatgcaggaa 1680
aaatgaattg cttggtattc attacttcat gtatatcaag cacagcagta aaacaaaaac 1740
ccatgtattt aacttttttt taggattttt gcttttgtga tttttttttt ttttttgata 1800
cttgccctaac atgcatgtgc tgtaaaaata gttaacaggg aaataacttg agatgatggc 1860
tagctttgtt taatgtctta tgaaattttc atgaacaatc caagcataat tgtaagaac 1920
acgtgtatta aattcatgta agtggataaa aagttttatg aatggacttt tcaactactt 1980
tctctacagc ttttcatgta aattagtctt ggttctgaaa cttctctaaa ggaaattgta 2040
cattttttga aatttattcc ttattccctc ttggcagcta atgggctctt accaagttta 2100
aacacaaaat ttatcataac aaaaatacta ctaataatac tactgtttcc atgtcccatg 2160
atccccctctc ttctctccca ccctgaaaaa aatgagttcc tattttttct gggggggggg 2220
ggggggggggg gggggggggg gggggggggg gggggggggg gggggggggg gggggggggg 2280
ggggaaaaat atttatttat aaaaaataca atgggataag tttatgctga gaaatgcagc 2340
aataaataca gttgaagaaa acagagcaac tctacattga tacattggca caaacaggaa 2400
gagcaaatgc atcaccagc cctaaatgtc cacaggccac ttttgtacat gctcttttag 2460
aaacaccact ctgaaaagat cttgttcgct aggtgaagaga atgagtacac atataatcac 2520
aaatgcacac tgatcatgac tttattttaa aattagcaaa caatactgta gaaacattga 2580
tatgtaaatt tctaaaatgc tgcattctaa atttagttgg caaagaccac atttagcaat 2640
aagcatgagt ttagtcttcc atgtagaaac cagatacact aaactgtaaa aaaaaaaaaa 2700
aaaaaagttt cctattgttt gaaaatacca gtttaatata agattgtaaa aatgcataga 2760
tttttgcata aaagaactgg ctgtacaaga gtactcccct ttcacagtat tcctttttac 2820
ttcatatgcg agttattgat tatgctgtag gatttaacta ttacagcact aaaaggcaac 2880
tattgagga agaggcagaa aaaggaaaaa ggaatgtacg taaggcaatt tttcttaaaa 2940
gtacaataag cttaatatgtg ttttaggaag acaagataaa aaaaactcga gactagttct 3000
ctctcgtgcc gaattc 3016
```

<210> 412

<211> 958

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (930)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (934)

<223> n equals a,t,g, or c

<400> 412

```
cttgcgctccc cgcgtgtgtg cgcctaattct caggtgggtcc acccgagacc ccttgagcac 60
caaccctagt ccccgcgcg gccccttatt cgctccgaca agatgaaaga aacaatcatg 120
aaccaggaaa aactcgccaa actgcaggca caagtgcgca ttggtgggaa aggaactgct 180
cgcagaaaaga agaaggtggt tcatagaaca gccacagcag atgacaaaaa acttcagtgc 240
tccttaaaga agttaggggt aaacaatatc tctggtattg aagaggtgaa tatgtttaca 300
aaccaaggaa cagtgatcca ctttaacaac cctaaagtgc aggcattctt ggcagcgaac 360
actttcacca ttacaggcca tgctgagaca aagcagctga cagaaatgct acccagcatc 420
ttaaaccagc ttggtgcgga tagtctgact agtttaagga gactggccga agctctgccc 480
aaacaatctg tggatggaaa agcaccactt gctactggag aggatgatga tgatgaagtt 540
ccagatcttg tggagaattt tgatgaggct tccaagaatg aggcaaatg aattgagtca 600
acttctgaag ataaaacctg aagaagttac tgggagctgc tattttatat tatgactgct 660
ttttaagaaa tttttgttta tggatctgat aaaatctaga tctctaatat ttttaagccc 720
aagccccttg gacactgcag ctcttttcag tttttgctta tacacaattc attccttgca 780
gctaattaag ccgaagaagc ctgggaatca agtttgaaac aaagattaat aaagttcttt 840
gcctagtaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 900
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa gggnggccgt tttaaaggaa ccaggttt 958
```

<210> 413

<211> 500

<212> DNA

<213> Homo sapiens

<400> 413

```
cgattgaaca ggagaagcaa gcaggcgaat cgtaatgagg cgtgcgccgc caatatgcac 60
tgtacattcc acaagcattg ccttcttatt ttacttcttt tagctgttta actttgtaag 120
atgcaaagag gttggatcaa gtttaaatga ctgtgctgcc cctttcacat caaagaacta 180
ctgacaacga aggccgcgcc tgcctttccc atctgtctat ctatctggct ggcagggaag 240
gaaagaactt gcatgttggg gaaggaagaa gtgggggtgga agaagtgggg tgggacgaca 300
gtgaaatcta gagtaaaacc aagctggccc aaggtgtcct gcaggctgta atgcagttta 360
atcagagtgc catttttttt tttgttcaaa tgattttaat tattggaatg cacaattttt 420
ttaatatgca aataaaaagt ttaaaaactt aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 480
gcggccgctc gaattaagcc 500
```

<210> 414

<211> 3397

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1)

<223> n equals a,t,g, or c

<220>

<221> misc feature
<222> (15)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (24)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (3081)
<223> n equals a,t,g, or c

<400> 414

```
nggattcgcg gccgntccga ctgnccgcgc ggctagcact gacgtgtctc tcggcggagc 60
tgctgtgcag tggaacgcgc tgggcccgcg gcagcgtcgc ctcacgcgga gcagagctga 120
gctgaagcgg gaccgcgagc ccgagcagcc gccgccatgg caatcaaatt tctggaagtc 180
atcaagccct tctgtgtcat cctgccggaa attcagaagc cagagaggaa gattcagttt 240
aaggagaaa tgctgtggac cgctatcacc ctctttatct tcttagtggt ctgccagatt 300
ccccgtttg ggatcatgtc ttcagattca gctgaccctt tctattggat gagagtgatt 360
ctagcctcta acagaggcac attgatggag ctagggatct ctcctattgt cacgtctggc 420
cttataatgc aactcttggc tggcgccaag ataattgaag ttggtgacac cccaaaagac 480
cgagctctct tcaacggagc ccaaaagtta tttggcatga tcattactat cggccagtct 540
atcgtgtatg tgatgaccgg gatgtatggg gacccttctg aaatgggtgc tggaaatttc 600
ctgctaatac ccattcagct ctttgttggc ggcttaattg tcctactttt ggatgaactc 660
ctgcaaaaag gatatggcct tggctctggg atttctctct tcattgcaac taacatctgt 720
gaaaccatcg tatggaaggc attcagcccc actactgtca acactggccg aggaatggaa 780
tttgaaggtg ctatcatcgc acttttccat ctgctggcca cagcacaga caaggtccga 840
gcccttcggg aggcgttcta ccgccagaat cttcccaacc tcatgaatct catcgccacc 900
atctttgtct ttgcagtggc catctatttc cagggtcttc gagtggacct gccaatcaag 960
tcggcccgcct accgtggcca gtacaacacc tatcccatca agctcttcta tacgtccaac 1020
atcccatca tcctgcagtc tgcctgggtg tccaaccttt atgtcatctc ccaaagtctc 1080
tcagctcgct tcagtggcaa cttgctggtc agcctgctgg gcacctggtc ggacacgtct 1140
tctgggggccc cagcacgtgc ttatccagtk ggtggccttt gctattacct gtcccccca 1200
tggtccatga actcaaccgg tacatcccca cagccgcggc ctttgggtgg ctgtgcatcg 1260
gggccctctc ggtcctggct gacttcctag gcgccattgg gtctggaacc gggatcctgc 1320
tcgcagtcac aatcatctac cagtactttg agatcttcgt taaggagcaa agcgagggtt 1380
gcagcatggg ggccctgctc ttctgagccc gtctcccga cagggtgagg aagctgctcc 1440
agaagcgcc cgggaaggga gctctcatca tggcgcgtgc tgctgcggca tatggacttt 1500
taataatgtt tttgaatttc gtattctttc attccactgt gtaaagtgtc agacattttc 1560
caatttaaaa ttttgctttt tatcctggca ctggcaaaaa gaactgtgaa agtgaaattt 1620
tattcagccg actgccagag aagtgggaat ggtataggat tgtccccaag tgtccatgta 1680
acttttgttt taacctttgc accttctcag tgctgtatgc ggctgcagcc gtctcacctg 1740
tttccccaca aagggaattt ctcactctgg ttggaagcac aaacactgaa atgtctacgt 1800
ttcatttttg cagtaggggt tgaagctggg agcagatcat gtatttcccg gagacgtggg 1860
acctgtctgg catgtctcct tcacaatcag gcgtgggaat atctggctta ggactgtttc 1920
tctctaagac accattgttt tcccttattt taaaagtgat ttttttaagg acagaacttc 1980
ttccaaaaga gagggatggc tttcccagaa gacactcctg gccatctgtg gatttgtctg 2040
tgcacctatt ggctcttcta gctgactctt ctggttgggc ttagagtctg cctgtttctg 2100
ctagctccgt gtttagtcca cttgggtcat cagctctgac aagctgagcc tggccaagct 2160
```

```

aggtggacag acccttgacg tgatgtccgt ttgtccagat tctgccagtc atcactggac 2220
acgtctcctc gcagctgccc tagcaagggg agacattgtg gtagctatca gacatggaca 2280
gaaactgact tagtgctcac aagcccctac accttctggg ctgaagatca cccagctgtg 2340
ttcagaattt tcttactgtg cttaggactg cacgcaagtg agcagacacc accgacttcc 2400
tttctgcgtc accagtgtcg tcagcagaga gaggacagca caggctcaag gttggtagtg 2460
aagtcagggt cggggtgcat gggctgtggg ggtgktgatc agttgctcca gtgtttgaaa 2520
taagaagact catgtttatg tctggaataa gttctgtttg tgctgacagg tggcctaggt 2580
cctggagatg agcaccctct ctctggcctt tagggagtcc cctcttagga caggcactgc 2640
ccagcagcaa gggcagcaga gttgggtgct aagatcctga ggagctcgag gtttcgagct 2700
ggcttttagac attggtggga ccaaggatgt tttgcaggat gccctgatcc taagaagggg 2760
gcctgggggt gcgtgcagcc tgtcggggag accycactgc tgrcagtgtc agccaggaaa 2820
cagagtgacc aagggacaag aagggacttg cctaaagcca cccagcaact cagcagcaga 2880
accaagatgg gccccaggct cctccatatg gcccagggtc taccacccta tcacacgtgg 2940
ccttgtctag acccagtcct gagcagggga gaggctcttg agacctgat ccctcctacc 3000
cacatggttc tcccactgcc ctgtctgtc tgctgtaca gaggggcagg gcctcccca 3060
gccacgctt aggaatgctt ngcctctggc aggcaggcag ctgtaccca gctggtgggc 3120
agggggctgg aaggcaccag gcctcaggag gagccccata gtcccgcctg cagcctgtaa 3180
ccatcggtg gccctgcaag gcccacactc acgccctgtg ggtgatggtc acggtgggtg 3240
ggtgggggct gaccccagct tccaggggac tgtcactgtg gacgccaaaa tggcataact 3300
gagataaggt gaataagtga caaataaagc cagtttttta caaggtaaaa aaaaaaaaaa 3360
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa 3397

```

<210> 415

<211> 2880

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (5)

<223> n equals a,t,g, or c

<400> 415

```

tgggnaccct tcaagctctc gtgctcattc ccccatgac gccgtaggaa gtgatgacag 60
tagcccaaac gcaatggcca aggttcagat ttttgaatat aatgaaaaca ccaggaaata 120
tgcaaaagct gaaactctta tgacagtcac tgatcctgtt catgatattg cattcgctcc 180
aaatttgagg agatctttcc atattctagc aatagcgacc aaagatgtga gaatttttac 240
attaaagcct gtgaggaaaag aactgacttc ctctgggtgg ccaacaaagt ttgaaatcca 300
tatagtggct cagttcgata atcataattc tcagggtctg cgagtgaagt ggaatataac 360
aggaacggtg ctagcatctt caggagatga tgggtgtgta agattgtgga aagctaatta 420
tatggacaat tggaagtgtg ctggtatttt gaaaggtaat gggagccag tcaatgggag 480
ttctcagcag ggaacctcaa atccttcctt aggttcaa atccaagtc ttcagaattc 540
attaaatgga tcttctgctg gcagaaagca cagctgagta caagctaact ggagtaactt 600
tgctgttttg ctgcttggtg catgcacaca ggaatggaaa gcgagctcct tttccccttc 660
cccagcgccg tttgacctct cccaagatac accagcagcc tgcttactac taaacgcaat 720
ccaaaaggcc tttaaaaata cagtgtatat tttttgtact agtcagttta ttgacactat 780
ttgaaacttt tgaaatataa acggagaggc tttctgttga gacattgtca ccaaaacaat 840
tttttgaaat gttcctgaaa ctaatttggt tttaaagatt aaaagggttg ttaccattct 900
tatctgagta gttgggagga ggggaatacc actttagttc atttgaaaaa tatagacata 960
tttcttttgc tttcttaaaa cagcttaaaa tgatgaactt ttataatttt aatttgaaga 1020
ttgaataaat attttttata aagattgttt tgagtgtgta tttgtttact tttgtagat 1080

```

```
ttgctttatc catgatattc agtacaactc tgtcatttct ttgtaatat taaaaaatat 1140
tagtaaagga gtgaattaat aaagtagtaa tagtaaaatg aaaggaactt gactgtacag 1200
tttgtagcca ggttaagcat ttggtattgt ttcatttaca atttgggact aagatggaaa 1260
cacttttttt ataagttttt aattcatagt cactaaagag ataaatgttt cttatatata 1320
tttgtrtatt tttatggtgt tttttattcc atggcttagc ttccttcaaa tcaaaatttg 1380
gacacacact attaagagaa gccattaaaa ttttactaaa attgtgcatg taaattaatt 1440
gtcagcattc catgtctcaa gattttctta atttagttcg ctgtttaaat taattcatgt 1500
cctgtaaagt tctgaccttg ataacaaagc tataaatatt taagtttgct aatatgcgta 1560
agtattatcg gtaagttaca agatggaaga agaataacag tagggcacag tcattctgtg 1620
aatcctttta cttatcaaaa tttggtagct attctaaggc ttttgcaaaa aaataagtgt 1680
tcaatgtttg tagttcttca aaagcatgtt gcagtagcca gccatactat gtgtattccc 1740
agtatcatgt acgcactaaa aaaaatgtgt gcttgctgct gctgtgagtg aaccattgct 1800
taagataaaa aacttaacta gatctgtaaa tgtacagaat agcatcagat gtttctgaga 1860
gattagaaaa tgttttgaat ttataaaatt aatgtttttc tttgtaacat ttatatatat 1920
ttyttaacat tttaagttta acagattgta ttcctttcaa gtttctatac ttgcttaagc 1980
aatcttgatt tgagtaaggg tcttgatttg tgctattatg ttctgttagt tttggcatga 2040
atatactaaa gctttttttt tttttycwag catgtgttty ctctcttttg gttctctttg 2100
tatttactac ttttctcttt ttcttggtgt ttttttttcc tgtttttgtt ttgtttggtg 2160
ttttgttcct gtcttcattg tttcaggtat ttctttacc ctcctggattc cccacgggct 2220
ggatcgagat ggtccagtta tgcccagctc ctctctctc ctctctctc tctggtagag 2280
cactcttgcg atgtcgacac tgccaacctc cagtatcctc accctcgag acgatatctc 2340
tctcggcctc ttaatccctt acctgagaat gaagggattt aaaacactga tttaacattg 2400
aaaggcctta ttcaagtgtt tgtaaatgct ttcatttctg gctgcttttt gtttttcatt 2460
ttctttcaga agatttttct aacttagggt ctgtcttgca tgtattacaa ccagaatata 2520
gtgtttggaa cctaaatctg tttgtgcgtc tgcacaaaag gaacatttgc ttcactgggt 2580
gataaccttt gatgaaatga gatatgtcca agtaacgtta actgtgaagt tacacacagt 2640
agctgacttc aaagtgcctg ttctgtaaat tttattttta actgttacca tagtcttaag 2700
ttgtttatgc tttatcagac tggctaattg gaaagcataa tattatgaag tttattctgc 2760
cttatgagac cttaaaaaat ggatttcatt ttacaggcta atgttgtaac tgactagtat 2820
gtaaaaataa tcattcctgt gtataaagca gcaaaccta aaaaaaaaaa aaaaaaaaaa 2880
```

```
<210> 416
<211> 1616
<212> DNA
<213> Homo sapiens
```

```
<220>
<221> misc feature
<222> (12)
<223> n equals a,t,g, or c
```

```
<220>
<221> misc feature
<222> (1610)
<223> n equals a,t,g, or c
```

```
<220>
<221> misc feature
<222> (1611)
<223> n equals a,t,g, or c
```

<220>

<221> misc feature

<222> (1616)

<223> n equals a,t,g, or c

<400> 416

```
cggacgctgg tngattccat gccaaagctt tgcaaggctc gcagtgacca ggcgccccgac 60
atgggagtg c atccgcccc acccttttcc ccctcgtctc ctgtgagaat tccccgtcgg 120
atacgagcag cgtggccggt ggctgcctcg cacaggactt cttccccgac tccatcactt 180
tctcctggaa atacaagaac aactctgaca tcagcagcac ccggggcttc ccatcagtcc 240
tgagaggggg caagtacgca gccacctcac aggtgctgct gccttccaag gacgtcatgc 300
agggcacaga cgaacacgtg gtgtgcaaag tccagcacc caacggcaac aaagaaaaga 360
acgtgcctct tccagtgatt gcygagctgc ctcccaaagt gagcgtcttc gtccccacccc 420
gcgacggctt cttcggcaac ccccgcaagt ccaagctcat ctgccaggcc acgggtttca 480
gtccccggca gattcagggt tcctggctgc gcgaggggaa gcaggtgggg tctggcgtca 540
ccacggacca ggtgcaggct gaggccaaag agtctgggcc cagcactac aaggtgacca 600
gcacactgac catcaaagag agcgactggc tcagccagag catgttcacc tgccgcgtgg 660
atcacagggg cctgaccttc cagcagaatg cgtcctccat gtgtgtcccc gatcaagaca 720
cagccatccg ggtcttcgcc atcccccat cctttgcccag catcttcctc accaagtcca 780
ccaagttgac ctgcctgggt acagacctga ccacctatga cagcgtgacc atctcctgga 840
cccgccagaa tggcgaagct gtgaaaaccc acaccaacat ctccgagagc caccccaatg 900
ccactttcag cgccgtgggt gaggccagca tctgcgagga tgactggaat tccgggggaga 960
ggttcacgtg caccgtgacc cacacagacc tgccctcgcc actgaagcag accatctccc 1020
ggcccaaagg ggtggccctg cacaggcccg atgtctactt gctgccacca gcccgggagc 1080
agctgaacct gcgggagtcg gccaccatca cgtgcctggt gacgggcttc tctcccgcg 1140
acgtcttcgt gcagtggatg cagagggggc agcccttgct cccgggagaag tatgtgacca 1200
gcgccccaat gctctgagcc caggccccag gccggtactt cgcccacagc atcctgaccg 1260
tgtccgaaga ggaatggaac acgggggaga cctacacctg cgtggtggcc catgaggccc 1320
tgcccaacag ggtcaccgag aggaccgtgg acaagtccac cggtaaacc accctgtaca 1380
acgtgtccct ggtcatgtcc gacacagctg gcacctgcta ctgacctgc tggcctgccc 1440
acaggtcctg ggcggctggc cgctctgtgt gtgcatgcaa actaaccgtg tcaacggggt 1500
gagatgttgc atcttataaa attagaaata aaaagatcca ttcaaaaara aaaaaaaaaa 1560
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaggggggn nccccn 1616
```

<210> 417

<211> 1815

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (270)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1184)

<223> n equals a,t,g, or c

<400> 417

```
cagggtcagg agatttctcc acgagcaagc actctggccc gaggttgacg atggtgcctt 60
```

```

taccacata gtcacagtct ggcaccatc ggtgcttcag tgggcatgca tgccgactg 120
ggggcagttc tcaggggagg ctgaggctgg gccacgtgag gaagggcctt ccctggcagc 180
caggatgccc ctctgctactc cccttaggag ccccgaggccc aggccactca ggtgtcagat 240
gtgccagcca cctcccggcg gcctgaacan gtcacgtggg cagctcagga acaggagctc 300
gagtcccttc gggagcagct ggaaggagt aaccgcagca ttgaggagg tggggccgac 360
atgaagaccc tgggcgtcac tttgtgcagg cagagtctga gtgccggcac agcaagctca 420
gtacagcaga gcgtgagcag gccctgcgcc tgaagagccg cgcggtggag ctgctgccc 480
atgggactgc caaccttgcc aagctgcags tgtggtggag aatagtgcc agcgggtcat 540
ccacttggcg ggtcagtggg agaagcaccg ggtccactc ctctgctgagt accgccacct 600
ccgaaagctg caggattgca gagagctgga atcttctcga cggctggcag agatccaaga 660
actgcaccag agtgtccggg cggctgctga agaggcccgc aggaaggagg aggtctataa 720
gcagctgatg tcagagctgg agactctgcc cagagatgtg tcccggctgg cctacacca 780
gcgcacacct gagatcgtgg gcaacatccg gaagcagaag gaagagatca ccaagatctt 840
gtctgatacg aaggagcttc agaaggaaat caactcccta tctgggaagc tggaccggac 900
gtttgcgggtg actgatgagc ttgtgttcaa ggatgccaa aaggacgatg ctgttcggaa 960
ggcctataag tatctagctg ctctgcacga gaactgcagc cagctcatcc agaccatcga 1020
ggacacaggc accatcatgc gggagggttcg agacctcgag gagcagatcg agacagagct 1080
gggcaagaag accctcagca acctggagaa gatccgggag gactaccgag ccctccgcca 1140
ggagaacgct ggctcctag gccgggtccg ggaggcctga ggancgccc gcagaggtct 1200
ctccccagcc tcaggcaggg atttgggtg ctggaggcag tggccaagca catgccctag 1260
ctacttctc cgctgtccag ttcctcctgc tgcggccttg gaccagacc cctgcccact 1320
gaccgcaacc cttatatggg gtgatatgcc agcatgtggg gagctcggct gcagtttatt 1380
ggggacggta ctgtgggtt ggggccttg atcccaaata aatgagtagt tcctctgcag 1440
tctaagctga ggcattggtc agggctcagg gaattggagt gaggtgagt gcaggggaga 1500
cacgggtat ttttggaag gcagtgtgtg tggctgtgtg tgtctgcacg ggactcaaga 1560
gaccactgg ggggctgtgc gtgtgcatat gcgtgagata cacaggtgaa ttctaacagg 1620
ccgtgtgtgt gagcgagcac gtgttgggac ctacagatcct gagggtagct acgctgcttc 1680
tgtgtaggcc tctgggcaca cccctgtgtt gacagtgcc ctgtgggccc tgaggctggc 1740
tgtgggtgcg tgccttgggg tgtgtgggtt gtcagggctg tgcttgtgtg tgattgtgtg 1800
atgatgcagc tttga 1815

```

<210> 418

<211> 1966

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (15)

<223> n equals a,t,g, or c

<400> 418

```

agaaaaccag tttanggtga cacgtagaga acgcacgccg tgcaggtagc ggtccggaat 60
tcccagggtc gaccacgcg tccggcttga gtaggcaaaa tgttgaagtt aagttttcca 120
ataatgtgac ttcttaaaag ttttattaaa ggggaggggc aaatattggc aattagttgg 180
cagtggcctg ttacggttgg gattgggtgg gtgggtttag gtaattgttt agtttatgat 240
tgcagataaa ctcatgccag agaacttaaa gtcttagaat ggaaaaagta aagaaatc 300
aacttccaag ttggcaagta actcccaatg atttagtttt tttccccca gtttgaattg 360
ggaagctggg ggaagttaa tatgagccac tgggtgtacc agtgcatata tttgggcaag 420
gaaagtgtca taatttgata ctgtatctgt tttccttcaa agtatagagc ttttggggaa 480
ggaaagtatt gaactggggg ttggtctggc ctactgggct gacattaact acaattatgg 540

```



```
gaaatgcaaa agttgtttgg atatggtagt gtgtgggttct cttttggaat ttttttcagg 600
tgatttaata ataatttaaa actactatag aaactgcaga gcaaaggaag tggcttaatg 660
atcctgaagg gatttcttct gatggtagct tttgtattat caagtaagat tctattttca 720
gttggtgtga agcaagtttt tttttagtgt aggagaaata cttttccatt gttaactgc 780
aaaacaagat gttaaggat gcttcaaaaa ttttgtaaat tgtttatttt aaacttatct 840
gtttgtaaat tgtaactgat taagaattgt gatagttcag cttgaatgtc tcttagaggg 900
tgggcttttg ttgatgaggg aggggaaact tttttttttt ctatagactt ttttcagata 960
acatcttctg agtcataacc agcctggcag tatgatggcc tagatgcaga gaaaacagct 1020
ccttggtgaa ttgataagta aaggcagaaa agattatatg tcataacctcc attgggggaat 1080
aagcataacc ctgagattct tactactgat gagaacatta tctgcatatg ccaaaaaaatt 1140
ttaagcaaat gaaagctacc aatttaaagt tacggaatct accattttta agttaattgc 1200
ttgtcaagct ataaccacaa aaataatgaa ttgatgagaa atacaatgaa gaggcaatgt 1260
ccatctcaaa atactgcttt tacaaaagca gaataaaagc gaaaagaaat gaaaatgtta 1320
cactacatta atcctggaat aaaagaagcc gaaataaatg agagatgagt tgggatcaag 1380
tggattgagg aggctgtgct gtgtgccaat gtttcgtttg cctcagacag gtatctcttc 1440
gttatcagaa gagttgcttc atttcatctg ggagcagaaa acagcaggca gctgttaaca 1500
gataagttta acttgcattc gcagtattgc atgttaggga taagtgttta tttttaagag 1560
ctgtggagtt cttaaataatc aacctggcag ctttctcctg accccttccc taggggattt 1620
caggattgag aaatttttcc atcgagcctt tttaaaattg taggacttgt tcctgtgggc 1680
ttcagtgatg ggatagtaca cttcactcag aggcatttgc atctttaaat aatttcttaa 1740
aagcctctaa agtgatcagt gccttgatgc caactaagga aatttgttta gcattgaatc 1800
tctgaaggct ctatgaaagg aatagcatga tgtgtgttta gaatcagatg ttactgctaa 1860
aatttacatg ttgtgatgta aattgtgtag aaaaccatta aatcattcaa aataataaac 1920
tatttttatt agagaatgta waaaaaaaaa aaaaaaaaaa ctcgta 1966
```

<210> 419

<211> 2852

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (2838)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2843)

<223> n equals a,t,g, or c

<400> 419

```
tcaagagcgg cctgggaatt tctacgtttc ctcagagagc atcaggaaag ggccgcccgt 60
cagaccatgg agggacaggc cccagtcaag tatatatgac ccttttgcgg gaatgaaaac 120
gccaggccag cggcagctta tcacctcca ggagcaggtg aagctgggca ttgtcaacgt 180
ggatgaggct gtgtccact tcaaagagt gacgtcaac cagaagarac gatcggagtc 240
ctttcgtttc cagcaggaat atcttaaagc gctaagagac agcatcaccc gaagacagag 300
agagaagcaa aaatcaggaa agcagacaga cttggagatc acgggtcccaa ttcggcactc 360
acagcacctg cctgcaaaag tggagtgttg agtctatgag agtggcccca ggaaaagtgt 420
cattccccct aggacggagc tgagacgagg agactggaaa acagacagca cctccagcac 480
agcaagtagc acaagtaacc gctccagcac ccggagcctc ctcagtgtga gcagcgggat 540
ggaaggggac aacgaggata atgaagtccc tgaggttacc agaagtcgca gtccaggccc 600
```

```

cccacaagtg gatgggacac ccaccatgty cctcgagaga cccccaggg tgcctccgag 660
agctgcctca cagaggmctc cgaccaggga gaccttccat cctcctccac ctgttccacc 720
cagaggacgc tgattccacc tcctaaaacc tgcctacttc aggacttta gactcacagt 780
cttcagcctg ttaatgatgt cttcatgttg agttttatag catgactgtt gaccttaaga 840
tccattctca ttgctgataa tgctgcagcc ctgctgggtt gggcttgcct cgaagatttt 900
attaaggcac gaagaagtga aaaactaagg gcttcattca ccatcaccaa gtatatcgaa 960
ccatatactt gtttgccaaa aggatgaaga cttaatcgaa atacttacct ctaatttgcc 1020
atatcagaag cctaaaaaga atgatcataa atgtacttca ccagtgattt tactgaaatg 1080
cacttatatt agtctttatg tatttgctag ttcagcctga tttctagaag aggttatagt 1140
gtgagacttg tagtattcaa gtaagataag tgacctaat ttaaaataat tcttctactt 1200
ttctgtatat tcagcagggt atttaagtgc tagggctggt cacacacaac caactgaaaa 1260
agactagagg gattagtaca aactcctctt atacagaagg caaatctgag gtccacaga 1320
agtctggaac caagactatt cagttgggta aataaagagg ttagtctaga ctgggcctgc 1380
tcattctagg tcaccacatt ttccatctcc aaatagccag gccctctctc cctcaagaaa 1440
tgccagatg tagaaattca tcagtgccta ttggctcttc agaattttcc atcttccgta 1500
tctcccaggc atgagactac caagtttggt tgttttcttt ccaatttggt aatttatact 1560
tcagtatggt ttcaacgcag ttatgtttcc agagaacatc tagaagtggc tggaaaccag 1620
aagctgggga ttccagggac cccacttagt gctctatttc ctttataggt tttatttctg 1680
gtcatagaga gagraggacc tttgactttt tcttcgttga ggcttctgag gaggaaaaac 1740
aaacctaata tagaaatata gtcagccttt caaatccatg ggttctgtgt ccgtggattc 1800
aaccaacctt ggatcaaaaa tatttgaaaa aaaatctaca aagtttcaaa aagcaaaact 1860
tgaatttgct gcatgccaag aagtatggtt aattcatgta aatgaagtga tgtgtaggca 1920
ttgtattaga tattataaga aatctagaaa tgatttaaag catacaggag gatgtgcata 1980
ggttatatgc aaatactatg ctattttata tatgggactt gagcatttgt ggattttgat 2040
actgggggat cctggaacca atccccatg gataccaaag tacgactgta gttatctatt 2100
ttttacatac ttattattac caccatgctc agtaagtcca tttttgcatg gaatatggag 2160
ccttaaaaca tgtcatgaat ttggagtccc tggcacataa atctaccttc aaatcagagg 2220
tccttaatga tgcctaaaca tacagtaaaa ttagaatcag aamtacttct ttaaaaaata 2280
ttcaaaatgt gtttggttcc catgggatta ttctctatcc cacacgaatg taaaaaaatc 2340
cacattaatg atccatttaa gtatagtttt attgggtcct tttctaata ttaaagggtc 2400
tttctcaatt tcattcctca gtctgcaag taaggactca tactgaagag tactgaaaca 2460
aggacttctt gtcagaaaca gcttctggaa tcttgggttt tgtttttgtt ttttgacaaa 2520
atacactatt ggccatgtcc atcacgagag tgtttgtagt aattaattac cttgtacagg 2580
acctggcact tagtagcatt cttcaaagt tccctcagt atccttttac tctcctgtc 2640
acttatttg gagaatagg ggcacrtgag ataagaagaa gaataatttt gatgttggt 2700
tgcttgccct gttacttata gacagtcttt gtcataggca aacttgaatt tgatttaaaa 2760
tagggctggg aaaaatatc aataactgta agccccctt taaatcaaat tcaagtttgc 2820
ccggcacgag gcctcgtnaa aanttcttg cc 2852

```

<210> 420

<211> 2705

<212> DNA

<213> Homo sapiens

<400> 420

```

tgagactgca ttcgtatctg agcaggtttt ctatgcctac tgatgtcagt atgtttatac 60
taaccttcat gcttttttcc cagaatccct catctgccag aaaacttgaa aagtttattg 120
cttgtagagt tgtactgctt tgatttttga agttggggtg gtagttagaa ctagatttaa 180
ctagtctata atgaacatga aggcttttat atatgaagtt gtataccttt ttgtgtttag 240
agaattatgg gaaacctggg aagcaaaact ttcctcccag ataattgctt ccaaattcga 300
agagttagtc accaagagag ccatatgtat gaaagcgtat ctgtgaaagg taggaaactt 360

```

```
accccccccta agtgtaaatgt tgcttttaggc aactccttgta aatagtgaga cttgtttggt 420
ctcttacatg tagagatttg agtgcagttg gtacagtact ttggtgtctc caccactgtc 480
ccttctcccc gcttcaaaat aagtgtaatc cacggtagca gccacacttc ctttagaagg 540
aactgttata atttatttaa aagttgaaaa accacccaag atgactacca actttcactt 600
ttttcttctg ccatccaccc tcatttttcc ttagcaaga tttttatata taactttcct 660
tccctccatt gagtacgtgc tttgagaaaa catttcttaa aacagtgtgt gccacctaag 720
gctggatggg aaagtgcagt cttgttggtc atataaaaac acacttctta ttagtttacc 780
acttgccttt ttctattggt aatgttctga atttcctttt cttggcttgt ttctacttca 840
ttttaccctg ggtcacttgc tgccagcagt ttgtgaatgg tgtctttcaa ataacttagt 900
tcttatggct tcacttaaaag actgtctcaa aaatactttg ctctcttctt cttttttgtt 960
catgggacat ggtacctaaag caaataggag ttgggttttg ttttctcct aaaataatgc 1020
tcaatactta cctaatacaa tggcatccat ttgaataaaa tgacaataac taaagctagt 1080
taatgtcagt gacattaaac taactccagg attcaggagt ttaaatgta gaatttagat 1140
ttaacagata gagtgtggct tcatttgtcc atggtagccc atctctccta agaccttttc 1200
tagtctgtct tcctgccttc gaacttgatg acagtaaaac cctgtttagt attctcttgt 1260
gcatttggtt tgttggttag ccgactgtct tgaaactatt cattttgctt ctagttttat 1320
tttacagagg tagcattggt ggggtttttt ttttctctg tctctgtgtt tgaagtttca 1380
gtttctgttt tctaggtaaag gcttattttt gatttagcagt caatggcaaa gaaaaagtaa 1440
atcaaatgag acttcttttc aaaatgtatt gtttagcact taactcagat gaatttataa 1500
attattaatc ttgatactaa ggatttgta cttttttgca tattaggta atttttacct 1560
tacatgtgag agtcttacca ctaagccatt ctgtctctgt actgttggga agttttggaa 1620
acccctgcc a gtgatctggt gatgatctga tgatttattt aaagagccgt tgatgcctcc 1680
aggaacttta agtattttat taatatatat ataggaattt tttttattt tgctttgtct 1740
ttctctccct tcttttatcc tcatgttcat tcttcaaacc agtgttttg aagtatgcat 1800
gcaggcctat aaatgaaaaa cacaattctt tatgtgtata gcatgtgtat taatgtctaa 1860
ctacatacgc aaaaacttcc tttacagagg ttcggactaa catttcacat gcacatttca 1920
aaacaagatg tgtcatgaaa acagcccctt tacctgccaa gacaagcagg gctatatattc 1980
agtgacagct gatatttggt ttgaaagtga atctcataat atatatatgt attacacatt 2040
attatgacta gaagtatgta agaaatgata agaacaaaag aaaatttcta ttttcatgca 2100
aatatttttc atcagtcata actctcaaat ataaattaaa atataacact cctgaatgcc 2160
tgaggcacga tctggatttt aaatgtgtgg tattcattga aaagaagctc tccaccact 2220
tggtatttca agaaaattta aaacgatccc aaggaaagat gatttgtatg ttaaagtac 2280
tgcacaagta aaagtccaat gttgtgtgca tgaaaaggat tccttggtta tgtgcaggga 2340
atcatctcac atgctgtttt tcctatttgg tttgagaaac aggctgacac tattctcttt 2400
gattagaaaa taaactcata aaactcataa tgttgatata atcaagatgt aaccactata 2460
aatatgtaga agaggaagtt ttaaaagacc ttaagctggc attgtgaagg aacaccatgg 2520
tagactcttt ttgtaaatgt attttgtatt taatgaaatg cagtataaag gttggtgaag 2580
tgtaatatata ttgtgtaaac aaatcctgtt aatagagaga tgtacagaat cgttttgtac 2640
tgtatcttga aacttgtgaa ataaagattc cacctctggt taaaaaaaaa aaaaaaaaaa 2700
aaaaa 2705
```

<210> 421

<211> 1901

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1828)

<223> n equals a,t,g, or c

<400> 421

```
accggactgg cctggggcg gacgtgggcg cgggggcgcg gcgtgaggca cgctgcaggg 60
ctgaagcggc ggcggcggtg gggactgcac gtagcccggc gctcggcatg gctctcctgg 120
tgctcggctc ggtgagctgt accttctttc tggcagtgaa tggctctgtat tcctctagt 180
atgatgtgat cgaattaact ccatacraatt tcaaccgaga agttattcag agtgatagtt 240
tgtggcttgt agaattctat gctccatggt gtggtcactg tcaaagatta acaccagaat 300
ggaagaaagc agcaactgca ttaaaagatg ttgtcaaagt tgggtgcagtt gatgcagata 360
agcatcattc cctaggaggt cagtatggtg ttcagggatt tcctaccatt aagatttttg 420
gatccaacaa aaacagacca gaagattacc aagggtggcag aactggtgaa gccattgtag 480
atgctgcgct gagtgcctctg cgccagctcg tgaaggatcg cctcggggga cgaagcggag 540
gatacagttc tggaaaacaa ggcagaagtg atagttcaag taagaaggat gtgattgagc 600
tgacagacga cagctttgat aagaatgttc tggacagtga agatgttttg atggttgagt 660
tctatgctcc ttggtgtgga cactgcaaaa acctagagcc agagtgggct gccgcagctt 720
cagaagtaaa agagcagacg aaaggaarag tgaaactggc agctgtggat gctacagtca 780
atcaggttct ggcctcccga tacgggatta gaggatttcc tacaatcaag atatttcaga 840
aaggcgagtc tcctgtggat tatgacggtg ggcggacaag atccgacatc gtgtcccggg 900
cccttgattt gtttcttgat aacgccccac ctctgagct gcttgagatt atcaacgagg 960
acattgcaa gagacgtgt gaggagcacc agctctgtgt tgtggctgtg ctgccccata 1020
tccttgatac tggagctgca ggcagaaatt cttatctgga agttcttctg aagttggcag 1080
acaaatacaa aaagaaaatg tgggggtggc tgtggacaga agctggagcc cagtctgaac 1140
ttgagaccgc gttggggatt ggagggtttg ggtacccgc catggccgcc atcaatgcac 1200
gcaagatgaa atttgctctg ctaaaaggct ccttcagtga gcaaggcatc aacgagtttc 1260
tcaggagact ctcttttggg cgtggctcca cggcacctgt aggaggcggg gctttcccta 1320
ccatcgttga gagagagcct tgggacggca gggatggcga gcttcccgtg gaggatgaca 1380
ttgacctcag tgatgtggag cttgatgact tagggaaaga tgagttgtga gagccacaac 1440
agaggcttca gaccattttc ttttcttggg agccagtgga ttttccagc agtgaaggga 1500
cattctctac actcagatga ctctaccagt ggccttttaa ccaagaagta gtacttgatt 1560
ggtcatttga aaacactgca acagtgaact tttgcatctc aagaaaacat tgaaaaattc 1620
tatgaattgt ttagccggt gaattgagtc gtattctgtc acataatatt ttgaagaaaa 1680
cttggctgtc gaaacatttt tctctctgac tgctgcttga atgttcttgg aggctgtttc 1740
ttatgtatgg gtttttttta atgtgatccc ttcatttgaa tattaatggc tttttccatt 1800
aaagaataaa atatttttga caatgccnaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1860
cycsaggggg ggcccgtcc caattcgccc tatagtgagt c 1901
```

<210> 422

<211> 2477

<212> DNA

<213> Homo sapiens

<400> 422

```
cacactttga gcgcacttct agtaaacggg tctccaggag tctagatgga gctccgattg 60
gtgtcatgga ccaaagtctt atgarggatt ttcctggcgc tgctggggag atttcagcct 120
atggacctgg acttgtcagc attgccgtgg tacaagatgg ggacggcagg agggaagtga 180
gaagcccaac taaagcccca catttgcagc tcattgaagg aaagagttca catgagactc 240
tgaatatagt ggaggagaag aagcgggcag aggttgggaa agacgaaaga gtaatcacag 300
aagaaatgaa tggtaaagag atatcacctg ggagtggtcc tggggagatt cgtaagggtg 360
agcctgtgac acaaaaagac tccacctccc tgtcttctga gagcagcagc agcagcagtg 420
agagtgaagg ggaagacgtg ggagagtacc gtccccacca ccgagtgacc gagggcacca 480
tcaggagagg acaggagtat gaagaagagg tggaggaaga accccgcccg gcagccaagg 540
tagtagagag ggaggaagca gtgcccgaag ccagcccagt cacacaagca ggtgccagtg 600
taatcacagt agaaacagtg atccaggaaa atgtaggtgc caaaaagata cccggagaga 660
```

agagtgtaca cgaagggcgt cttaagcaag acatggggaga agaagcagag gaagagccac 720
agaaagttaa cggagaggtg tcccatgttg acattgatgt tttgccacaa attatttgtt 780
gttcagagcc accagtggta aaaacagaga tggtaacaat ttctgatgcc tcacaaagga 840
cagaaatctc caccaaggaa gtccccattg tccaaactga gacccaaaacc atcacatatg 900
agtctccaca gattgatggc ggggctgggt gtgattcggg cacgttactg accgcacaaa 960
ccatcacatc tgagtccgtg tcaacaacga caaccacaca catcaccaag actgtaaaag 1020
gtggaatttc tgaaacaaga attgagaaac gcattgtgat cacaggagat ggagatattg 1080
atcatgacca ggcactggct caggcgatca ggggaagccag agagcagcac cctgacatgt 1140
cggtcacaag agtgggtggta cacaaagaaa cagagttggc tgaggaaggg gaagattaag 1200
taagaaagtc atttttttaa caacactcaa ctttgtgaac ccctgaagat tttttgaccg 1260
ttccaagtct taatgccaca ccactattcc agcgaattta tgctacaact ggtaacaatg 1320
accagaagcc tgaagaatta aaatgccaac accaaacctt tccttaccag ctctgggtcta 1380
tattgctccc atgcatttaa tatattattt tgttttataa ccacttctaa atattctcag 1440
ttctttcttt ttgttgttgt taattaaggg gttttgtgtt tgttttctgt ttactttgtg 1500
tgcaactacc tgcttttaat gactcacttt gatcaaatga cagtgaacaa agccagccca 1560
agctgktaa gtgctgttca cttgaacagg tgctgttgcg cagaaaggaa actctgtgac 1620
taatttagat agtggctttc cttcttctgg attcttttca ttgaattctc acagtaaata 1680
tttacggagt tttcaaattg cagcaaatat actgtatgag aaaatattaa tacagattaa 1740
aagcctttct tacatcttga aaattttcta atatttgaga atttcacagg gatgtttttt 1800
atattggacc cttttgactt tccagtcctg tgactttcta ctttttagtag agagtcagaa 1860
tctctggact ggagaataat gaagaagttc actgactgtg cactgtgctt agagaccctg 1920
ccgcaccaca gtgccaatgc ttgtcagaca catgcccttc ggcagcattc cagaacagga 1980
gggaagagaa agagaaaact ttcttccctt ctactaaaag attcaggcag cttaaaacct 2040
tagtgctttc tttcttaaca tacccaaatt tcaattcttt ccattatttg aacacttggg 2100
tagaactctt gctttgtatt aaacctcttt gtctacacat gtaaaactta ccttttgtaa 2160
ttgagcaggc ctatctcttt cagatagttt tatgattcac acaggtttga ggatgctggg 2220
gagaggggga gggggctgtg gtgggtgttct gttggttaca agaaagtatt accatttaaa 2280
gctggcacca gagaccgat agggacttat taactatatt gaacattttt tcctttgcct 2340
ttgaccctat gtatagttac gatgccagat tagatttata gcagcctcaa gttgtattaa 2400
atgatatttt gcttcctgta atactattat aaaataaagt ttgtttattc tctaaaaaaa 2460
aaaaaaaaa actcgag 2477

<210> 423

<211> 777

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (759)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (764)

<223> n equals a,t,g, or c

<400> 423

ttcctcgcgg aagtggggag gaggcggttg cggttagtgg accgggaccg gtaggggtgc 60
tgttgccatc atggctgacc ccgacccccg gtaccctcgc tcctcgatcg aggacgactt 120
caactatggc agcagcgtgg cctccgccac cgtgcacatc cgaatggcct ttctgagaaa 180

```
agtctacagc attctttctc tgcaggttct cttactaca gtgacttcaa cagttttttt 240
atactttgag tctgtacgga catttgtaca tgagagtcct gccttaattt tgctgtttgc 300
cctcggtatct ctgggtttga tttttgcgtt gaytttaaac agacataagt atccccttaa 360
cctgtacctt ctttttggtt ttacgctgtt ggaagctctg actgtggcag ttgttgttac 420
tttctatgat gtatatatta ttctgcaagc ttctatactg actactacag tatttttttg 480
tttgactgtg tatactctac aatctaagaa ggatttcagc aaatttgagg cagggctgtt 540
tgctcttttg tggatattgt gcctgtcagg attcctgaag tttttttttt atagtगत 600
aatggagtgt gtcttagccg ctgcaggagc ccttcttttc tgggggattc atcatctatg 660
acacacacta ctgatgcata aactgtcacc tgaagagtac gtattagctg gcatcaagcc 720
tctacttggg tatcatcaat ctattcctgg acctgtacng gttnttggga acaagtt 777
```

<210> 424

<211> 1649

<212> DNA

<213> Homo sapiens

<400> 424

```
ggccctttgc gcctgcgcc agctcgccct gcctagccag gagcgccccg cccctgcct 60
gcccggccac cttcgggagc cgcttccaat aggcgttcgc cattggctct ggcgacctcc 120
gcgcgttggg aggtgtagcg cggctctgaa cgcgctgagg gccgttgagt gtcgcaggcg 180
gcgagggcgc gagtgaaggag cagacccagg catcgcgcg cgagaaggcc gggcgctccc 240
acactgaagg tccggaagg cgacttccgg gggctttggc acctggcgga ccctcccgga 300
gcgtcgccac ctgaacgcga ggcgctccat tgcgctgctg cgttgagggg cttcccgcac 360
ctgatcgca gacccaacg gctggtggcg tcgcctgcgc gtctcggtg agctggccat 420
ggcgagctg tgcgggctga ggcggagccg ggcgtttctc gccctgctgg gatcgctgct 480
cctctctggg gtccctggcg ccgaccgaga acgcagcatc cacgacttct gcctggtgtc 540
gaaggtggtg ggcagatgcc gggcctccat gcctaggtgg tggtaaatg tctactgacg 600
atcctgccag ctgtttgtgt atgggggctg tgacggaaac agcaataatt acctgaccac 660
ggaggagtgc ctcaagaaat gtgccactgt cacagagaat gccacgggtg acctggccac 720
cagcaggaat gcagcggtt cctctgtccc aagtgtctcc agaaggcagg attctgaaga 780
ccactccagc gatatgttca actatgaaga atactgcacc gccaacgcag tctactgggc 840
ttgccgtgca tccttcccac gctggtactt tgacgtggag aggaactcct gcaataactt 900
catctatgga ggctgccgg gcaataagaa cagctaccgc tctgaggagg cctgcatgct 960
ccgctgcttc cgccagcagg agaatcctcc cctgcccctt ggctcaaagg tgggtggttct 1020
ggcggggctg ttcgtgatgg tgttgatcct ctccctggga gcctccatgg tctacctgat 1080
ccgggtggca cggaggaacc aggagcgtgc cctgcgcacc gtctggagct ccggagatga 1140
caaggagcag ctggtgaaga acacatatgt cctgtgccgc cctgtcgcca agaggactgg 1200
ggaagggagg ggagacatgt gtgacttttt ttaaataagag ggattgactc ggatttgagt 1260
gatcattagg gctgaggctt gtttctctgg gaggtaggac ggctgcttcc tggctctggca 1320
gggatgggtt tgctttggaa atcctctagg aggtcctcc tcgcatggcc tgcagtctgg 1380
cagcagcccc gagttgtttc ctgctgctgc gatttctttc cccaggtaga gttttctttg 1440
cttatgttga atccattgcc tcttttctca tcacagaagt gatgttgga tcgtttcttt 1500
tgtttgtctg atttatggtt tttttaagta taaacaaaag ttttttatta gcattctgaa 1560
agaaggaaag taaatgtaca agtttaataa aaggggcctt cccctttakt aaaaaaaaaa 1620
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1649
```

<210> 425

<211> 1608

<212> DNA

<213> Homo sapiens

<220>
<221> misc feature
<222> (1598)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1600)
<223> n equals a,t,g, or c

<400> 425
gcgcgggcgg cggrcgrggg cgtegetgcg cggctggccg gtgaggcgcg gcatggggcg 60
agtgcagetc ttcgagatca gcctgagcca cggccgcgctc gtctacagcc ccggggagcc 120
gttggtggg accgtgcgcg tgcgcctggg ggcaccgctg ccgttccgag ccatccgggt 180
gacctgcata gggtcctgcg ggggtctccaa caaggctaag gacacagcgt gggtagtgga 240
ggagggttac ttcaacagtt ccctgtcgct ggcagacaag gggagcctgc ccgctggaga 300
gcacagcttc cccttcagtc tccgtgcttc tgccactgca cccacgtcct ttgagggtcc 360
tttcgggaag atcgtgcacc aggtgagggc cgccatccac acgccacggt tttccaagga 420
tcacaagtgc agcctcggtg tctatatctt gagccccttg aacctgaaca gcatcccaga 480
cattgagcaa cccaacgtgg cctctgccac caagaagttc tcctacaagc tgggtgaagac 540
gggcagcgtg gtcctcacag ccagcactga tctccgcggc tatgtggtgg ggcaggcact 600
gcagctgcat gccgacgttg agaaccagtc aggcaaggac accagccctg tgggtggccag 660
tctgctgcag aaagtgtcct ataaggccaa gcgctggatc cacgacgtac ggaccattgc 720
ggagggtggg ggtgcggggc tcaaggcctg gcggcggggc cagtggcacg agcagatcct 780
ggtgcctgcc ttgccccagt cggccctgcc ggctgcagcc tcacccacat cgactactac 840
ttacaggtct ctctgaaggc gccggaagct actgtracce tcccggctctt cattggcaat 900
attgctgtga accatgcccc agtgagcccc cggccaggcc tggggctgcc tcctggggcc 960
ccacccttg tgtgccttcc gcaccacccc aggaggaggc tgaggctgag gctgcggctg 1020
gcggccccca cttcttgagc cccgtcttcc tctccaccaa gagccattcg cagcggcagc 1080
ccctgctggc caccttgagt tctgtgcctg gtgcgccgga gccctgccct caggatggca 1140
gccctgcctc acaccgctg caccctccct tgtgcatttc aacagggtgc actgtcccct 1200
actttgcaga gggctccggg gggccagtgc ccactaccag caccttgatt ctctctccag 1260
agtacagttc ttggggctac ccctatgagg cccaccgctc ttatgagcag agctgcggcg 1320
gcgtggaacc cagcctgacc cctgagagct gaccccgctc tgccttctcc aggcaggcct 1380
ggcctctgcc ctgggactgg ggcgcccagg gcctcgtgcc ttctctcttg gcctagcctg 1440
gccactcag gacctgcccc gcctctgcca gctcctctgc atccgccctc ttctccctgg 1500
ggctggggtg ggggtggcag ggagctggga cctggagaga caactcctgt aaataaaaca 1560
ctttatttgt agaaaaaaaa aaaaaaaaaa aaaaaaantn gggggggg 1608

<210> 426
<211> 1794
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (1789)
<223> n equals a,t,g, or c

<220>
<221> misc feature

<222> (1790)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1793)

<223> n equals a,t,g, or c

<400> 426

```
gtctctctct ctctctctct ctctcccttg tgcccgettt ctgccatccg cgctgtctcg 60
tgtctccctt ttccattaa atgcctcttt tcttgccggg ctcattstcg gaatagtgc 120
ctacggggac atacctatcc ccaactatcc taggcccgag aaccagccct tgccttcgag 180
taacaggcgg agactcgctg aggcgagttg cacttcta at tgggcgtgag gtcttgtcaa 240
tccccaaagt cttccaatca gaagtcggg ccatccagcc ttccgctccc cattggcctg 300
tgtggaggaa gaggggtggg taagccgaag tcgctgcgct cagtgcgag gcgcgaagaa 360
gctggcaggg gcacgagccg ggggcggggt tgaagacgcg tcgttggggt ttggaggccg 420
tgaaacagcc gtttgagttt ggctgcgggt ggagaacggt tgtcaggggc ccggccaaga 480
aggaggcccg cctgttacga tgggtgccat gagtttcaag cggaaccgca gtgaccggtt 540
ctacagcacc cgggtgctgcg gctgttgcca tgtccgcacc gggacgatca tcctggggac 600
ctggtacatg gtagtaaacc tattgatggc aattttgctg actgtggaag tgactcatcc 660
aaactccatg ccagctgtca acattcagta tgaagtcac ggtaattact attcgtctga 720
gagaatggct gataatgcct gtgttctttt tgccgtctct gttcttatgt ttataatcag 780
ttcaatgctg gtttatggag caatttctta tcaagtgggt tggctgattc cattcttctg 840
ttaccgactt ttgacttcg tcctcagttg cctggttgct attagtctc tcacctattt 900
gccagaatc aaagaatata tggatcaact acctgatttt ccctacaaag atgacctcct 960
ggccttgagc tccagctgcc tcctgttcat tgttcttggt ttctttgcct tattcatcat 1020
ttttaaggct tatctaatta actgtgtttg gaactgctat aaatacatca acaaccgaaa 1080
cgtgccggag attgctgtgt accctgcctt tgaagcacct cctcagtagc ttttgccaac 1140
ctatgaaatg gccgtgaaaa tgctgaaaa agaaccacca cctccttact tacctgcctg 1200
aagaaattct gcctttgaca ataaatccta taccagcttt ttgtttgttt atgttacaga 1260
atgctgcaat tcagggtctt tcaaacttgt ttgatataaa atatgttgtc ttttgtttaa 1320
gcatttattt tcaaacacta aggagctttt tgacatctgt taaacgtctt tttgtttttt 1380
tgtaagtctt ttacattttt aatagttttt gaagacaatc taggttaagc aagagcaaag 1440
tgccattggt tgccctta at tgggggggtg gaagggaaag aggggtactg ccacatagtt 1500
tcctttttaa ctgcactttc tttatataat cgtttgcat tttgttactg ctaccctgag 1560
tactttcagg aagactgact taaatattcg gggtagtaaa gtagttgggt ataagatctg 1620
aacttttcat ctgcagaggc aagaaaaata ttgacattg tgacttgact gtggaagatg 1680
atggttgc at gtttctagtt tgtatatgtt tccatctttg tgataagatg atttaataaa 1740
tctctttaaa tactaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaann aana 1794
```

<210> 427

<211> 770

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (14)

<223> n equals a,t,g, or c

<220>

<221> misc feature
 <222> (40)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (97)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (618)
 <223> n equals a,t,g, or c

<400> 427
 ccaggcccta taancccggc accttgggga ggctgaggcn ggaagcacca cggagcccca 60
 ggagttgggg acccggtgg gccaccatag ccaggggnccc tgtctatattt tttaaaaaag 120
 taaaaaatag aaattatctc actacttaaa tcccattttt ttcacttcat atgaaagaac 180
 atattgatag tatattctat attatttcat agatctgtct gaaagagatt gggaacaaaa 240
 atatctaatt gagatattct ttaatttttt acatagcagc tttatttttt ttattctgta 300
 gtatcagcga aatcagtcac gtttatacct tgaatataaa tatcaggaat catgcaatta 360
 tttctactat gtatttagta gtatcttata tttgtataac attattacat ttgcaaatt 420
 agtatcacia ctgctaagta gatgtttctg agtattagaa aaatcagtggt tattacctgc 480
 aggatatttaa aaaacatttg aaaaagagaa aaagaaaaat cagtgttttag aaatgttgat 540
 agttattgaa tctttgaatt gaatttttaa aatccattct agtaatcaga gtatactttt 600
 tttatagaac aaggtggnca ggtggggagc cctttaccct tctggtgaag ttaaaccata 660
 ggaagtttac aatttgcctt tcacaaacat tagcagtcog gggcatggtg gctgragcct 720
 gtgratyccc agcatgttgg ggaggcccga gttggggagg gttgcctgag 770

<210> 428
 <211> 512
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc feature
 <222> (18)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (30)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature
 <222> (38)
 <223> n equals a,t,g, or c

<220>
 <221> misc feature

<222> (484)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (491)

<223> n equals a,t,g, or c

<400> 428

```
tg gatcccc gggactgnca gaattccggn cacgaggnaa gagacttgct ttgacaagta 60
cactgggaac acttaccgag tgggtgacac ttatgagcgt cctaaagact ccatgatctg 120
ggactgtacc tgcacgggg ctgggcgagg gagaataagc tgtaccatcg caaaccgctg 180
ccatgaaggg ggtcagtcct acaagattgg tgacacctgg aggagaccac atgagactgg 240
tggttacatg ttagagtgtg tgtgtccttg taatggaaaa ggagaatgga cctgcaagcc 300
catagctgag aagtgttttg atcatgctgc tgggacttcc tatgtggtcg gagaaacgtg 360
ggagaagccc taccaaggct ggatgatggt agattgtact tgcctgggag aargcagcgg 420
acgcatcact tgcacttcta gaaatagatg caacgwtcag gacacaagga catctataga 480
attngagaca ncttgagcaa gaaggataat cg 512
```

<210> 429

<211> 1470

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1346)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1347)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1357)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1387)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1415)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1454)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1462)

<223> n equals a,t,g, or c

<400> 429

```
gtggacacgg aagtggctgt cgtcgcggca ccggtgggag ctaggcgcga ggctcggagt 60
gcggccagcg ggccggaggcg gtctcgcacg ggccggcgacg gagggctcag gcgtcgtcgt 120
ttgggtgggg ggccgctgaa ctgacaagcg acatttcagc tcctttcacc cgccggaacc 180
ccggagccgg ggcccgcctca gccggcggtta ccatgaccaa ggccggtagc aagggcgggg 240
acctccgcga caagctggac ggcaacgaac tggacctgag cctcagcgac ctgaatgagg 300
tcccggtgaa ggagctggct gcccttccaa aggccaccat cctggatctg tcttgtaata 360
aactgactac tctaccgtcg gattttctgt gcctcacaca cctggtgaa gtagacctga 420
gtaagaacaa gctgcagcag ctgccagcag actttggccg tctgggtcaac ctccagcacc 480
tggatctcct caacaacaag ctggtcacct tgcctgtcag ctttgcctcag ctcaagaacc 540
tgaagtgggt ggacctgaag gataaccccc tggatcctgt cctggccaag gtggcagggtg 600
actgcttgga tgagaagcag tgtaagcagt gtgcaacaa ggtgttacag cacatgaagg 660
ccgtgcaggc agatcaggag cgggagaggc agcggcggtt ggaagtagaa cgtgaggcag 720
agaagaagcg tgaggctaag cagcgagcta aggaagctca ggagcgggaa ctgcggaagc 780
gggagaaggc ggaagagaa ggcgcgggga gaaaggagta tgatgccctc aaagcagcca 840
agcgggagca ggagaagaaa cctaagaagg aagcaaatca ggccccgaaa tctaagtctg 900
gtccccgtcc ccgcaagcca ccaccccgga agcacactcg ttcctgggct gtgctgaagc 960
tgctgctgct gctgctgcta tttgggtgtg cgggagggtt ggttgcttgt cgggtgacag 1020
agctgcagca gcagcccctc tgcaccagcg tgaacaccat ctatgacaat gcggtccagg 1080
gtctacgccg ccatgagatc ctccagtggg tcctccagac cgactctcag cagtgaagctt 1140
gtccccagca cctgctgcct ccagccttg gagtttggat tcctatggaa ttgggttctg 1200
ctggacacaa cctcttttta gcatcagacc tacctgccat catcaaattg ctgcagattg 1260
gtacatgaga ccttctcttt gtaggaactt ttcattcctt agtcagggtt ccctgaagga 1320
atgaggagaa atgggagggt gccggnnngg ccgtggnggc aagttacctg catgcctaaa 1380
ggagtangct tgggggtggg agagagaaaa catanctttt tagtgtatat aagttgggaa 1440
aggcaagggt ggtntactaa anggcagttg 1470
```

<210> 430

<211> 434

<212> DNA

<213> Homo sapiens

<400> 430

```
ggccttggtta tggctcctat tgcttggttg ctgccagcct tctcctcggc cccagaggcc 60
atgcacccgt gggagctctt tgtaaagtac taccatgcta agaacggccg tgcttatgtg 120
gaatccccag cccggaagct ctcccagtc ttcgcccttc ctgttacggg aggcactggt 180
gtcaccccca aacagagcct actgacagcc atccacatgg tgctgacaga gcatgacctt 240
tttaagcgca gtgcagactc agaattgaag gccttggtgt gcatggcact gaatgagcca 300
gcgtctggtg tcctgggtga acctcatctg caaktccggg tactsatcg agcctcacta 360
ccagccctgg rrcatcatgg cacacacagg cttttgaaaa ttgcctcaac ctgctcagtc 420
gcctcaacaa cctc 434
```

<210> 431

<211> 1823

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1804)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1805)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1815)

<223> n equals a,t,g, or c

<400> 431

```
ggcacgagcc cgcgccgcc cgcgcgcgc cggcgcgtgt cagctccctc agcgtccggc 60
cgaggcgcgg tgtatgctga gccgctgccg cagcsggctg ctccacgtcc tgggccttag 120
cttcctgctg cagaccgcc ggccgattct cctctgctct ccacgtctca tgaagccgct 180
ggtcgtgttc gtccctcggcg gcccgggcgc cggcaagggg acccagtgcg cccgcctcgt 240
cgagaaatat ggctacacac acctttctgc aggagagctg cttcgtgatg aaaggaagaa 300
cccagattca cagtatggtg aacttattga aaagtacatt aaagaaggaa agattgtacc 360
agttgagata accatcagtt tattaagag ggaaatggat cagacaatgg ctgccaatgc 420
tcagaagaat aaattcctga ttgatgggtt tccaagaaat caagacaacc ttcaaggatg 480
gaacaagacc atggatggga aggcagatgt atctttcgtt ctcttttttg actgtaataa 540
tgagatttgt attgaacgat gtcttgagag gggaaagagt agtggttaga gtgatgacaa 600
cagagagagc ttggaaaaga gaattcagac ctaccttcag tcaacaaagc caattattga 660
cttatatgaa gaaatgggga aagtcaagaa aatagatgct tctaaatctg ttgatgaagt 720
ttttgatgaa gttgtgcaga tttttgacaa ggaaggctaa ttctaaacct gaaagcatcc 780
ttgaaatcat gcttgaatat tgctttgata gctgctatca tgaccctttt ttaaggcaat 840
tctaactctt cataactaca tctcaattag tggctggaaa gtacatggta aaacaaagta 900
aatTTTTTTT tgttctTTTT tttggtcaca ggagtagaca gtgaattcag gtttaacttc 960
accttagtta tgggtgctcac caaacgaagg gtatcagcta ttttttttta aattcaaaaa 1020
gaatatccct tttatagttt gtgccttctg tgagcaaaac ttttttagtac gcgtatatat 1080
ccctctagta atcacaacat tttaggattt agggataccc gcttcctctt tttcttgcaa 1140
gttttaaat tccaacctta agtgaatttg tggaccaa atcaaaaggaa ctttttgtgt 1200
agtcagttct tgcacaatgt gtttggtaaa caaactcaaa atggattctt aggagcattt 1260
tagtgtttat taaataactg accatttgct gtagaaagat gagaaaactt aagctttgtt 1320
ttactacaac ttgtacaaag ttgtatgaca gggcatattc tttgcttcca agatttggtt 1380
tgggggcact aggggttcag agcctggcag aattgtcagc tttagtctga cataatctaa 1440
gggtatgggg caaggatcac atctaagtct tgtgttcctt atactctatt atatagtgtt 1500
attcatgatt cagctgatct taacaaaatt cgtagcagtg gaaccttgaa atgcatgttg 1560
ctagatttat gctaaaatga ttctcagtta gcattttagt aacacttcaa aggttttttt 1620
ttgtttgttt tctagactta ataaaagctt aggattaatt agaagaagca atctagttaa 1680
atttcccat tgtattttat tttcttgaat acttttttca tagttatttg tttaaaaaga 1740
tttaaaaatc attgcacttt ggtcagaaaa ataataaata tatcttataa gggggggccc 1800
ggannccaat tcggnctgga gga 1823
```

<210> 432
<211> 3391
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (1)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (33)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (68)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (99)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (114)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (3293)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (3391)
<223> n equals a,t,g, or c

<400> 432
nccccctttg ccctcaaadc caaaaatggg aanaattgtg gaacccattg ccacttgcat 60
tgcccttnga ccaggattga aattgatcca ttccccctcna ttccctggtt gggnaaccgg 120
ggaaacccta attgaaagac ttgtaaagcc cacgcccatt atttaagtgg gaaatcgggt 180
gcctccaccc aacacagctg gctgccttag gaatgtaagc ctcagagagg agtgaagctc 240
gccggaaact tcgggaatgt gatggtttag ttgatgccct cattttcatt gttcaggctg 300
agattgggca gaaggattca racagcaagc ttgtagagaa ctgtgtttgc cttcttcgga 360
acttatcata tcaagttcac cgggagatcc cacaggcaga gcgttaccaa gaggcagctc 420
ccaatgttgc caacaatact gggccacatg ctgccagttg ctttggggcc aagaaggga 480
aagggaacaaa acctatagag gatccagcaa acgatacagt ggatttcctt aaaagaacga 540

gtccagctcg aggcctatgag ctcttatttc agccagaggt gggtcggata tacatctcac 600
ttcttaagga gagcaagact cctgccatcc tagaagcctc agctggagct atccagaact 660
tgtgtgctgg gcgctggacg tatggctgat acatccgctc tgctctgctg caagagaagg 720
ctctttctgc catagctgac ctcttgacta atgaacatga acgggtgggtg aaagctgcat 780
ctggagcact gagaaacctg gctgtggatg ctgcgaacaa agaattaatt ggtaaacatg 840
ctattcctaa cttggtaaag aatctgccag gaggaacagca gaactcctct tggaatttct 900
ctgaggacac tgtcatctct attttgaaca ctatcaacga ggttatcgct gagaacttgg 960
aggctgccaa aaagcttcga gagacacagg gtattgagaa gctgggtgtg atcaacaaat 1020
cagggaaaccg ctcaaaaaa gaagttcgag cagcagcact tgtattacag acaatctggg 1080
gatataagga actgcggaag ccaactggaaa aagaaggatg gaagaaatca gactttcagg 1140
tgaatctaaa caatgcttcc cgaagccaga gcagtcattc atatgatgat agtactctcc 1200
ctctcattga ccggaacca aaatcagata agaaacctga tcgggaagaa attcagatga 1260
gcaatatggg atcaaacaca aaatcactag ataacaacta tccacacca aatgagagag 1320
gagaccacaa tagaacactg gatcgatcgg gggatctagg cgacatggag ccattgaagg 1380
gaacaacacc cttgatgcag gacgaggggc aggaatctct ggaggaagag ttggatgtgt 1440
tggttttggg tgatgagggg ggccaagtgt cttaccctc catgcagaag atttagcacc 1500
actatctccg ttcactctgg gcttatatgt acttttattt ttgggtgggtg aaattgactg 1560
atgattttcc tttttcttcg ctggactatt gtgccactg ccaggctgcc tcctgccctt 1620
acagccctaa gtggtgcct tctttccatc aactcccaac tcttctctgt gaagtttaat 1680
tgtctcaacg cctccccctc cccattccc tccatttttc tcccaagaaa cctgactcaa 1740
ttatttgcct attttgagaa actgctgcag attagtctct tttgccagtt tccctggaa 1800
ctcctggcct tttgtggagg ggagggatg agagaatagg aatcttctact agaagccgtg 1860
ggaagaattg gaagttacat gctgtatatg caatgtccag cagtctgata aactgacgat 1920
tcttaatcaa gatttttttc ctgatgggga agggactttt attttctttt agagagggga 1980
aagtgtgagc tcttccctta ttcctaattg ctatttttga agcaaagaag gccagcaaca 2040
ttggcacatg ccacctggca aaggacctt gagtaagtga aggtctccta aaactgggat 2100
taagaaacct tgctctctc atctccaagg cagggacct caagaacct cagactccat 2160
ctcttctgca agcctcatgc caacctggg ctattgctgc tgcccttaa acacaggctg 2220
tccttaacct acctctctg ccctgtgata tgtctgctga gttggcctgg ccatttccaa 2280
gaggctgtag aaaggggaga atgtcaagga agacttttg tagagaagga gcagaaagat 2340
gtgttttttg gaagaagaag acctctagga ggagctagta ggaatgtaca tgaagcaatt 2400
agtctgaaac tggttcccc actccccgt ttctcctttt cctatcctta taggcctgtc 2460
ccttgctct gccctggatt gggtggcaaa ctaaaggact tgatgtacat aactcctgtc 2520
ccttttccct tacaaggtg ggattgcccc tggttttgcc tcttctttgt gcctttggcc 2580
tggggtgcat ctctcccg ccttccatgt gcctttcttt gcctctgcag tctcatttct 2640
cataattttg caaattatat tttgttgctt tcttacctac tattggccct aaatagcaga 2700
aagaagagaa gtgaccgaga gaacctcaga ttcttcattg aggattggta tagccatgat 2760
ttcagtcata gcaagctttt gctcaacagc atatgggtgg gattttgcaa aaatcctatt 2820
ctgatgaatc tcaaagtaag gctggtaaga gaagtgaagt gtgtgactct tactccttag 2880
gtgcccagaa tttaccatca tctctgaagg agttacaggg aagtggctc cccaattctc 2940
ccctccctcc agtattgcc cctctcact tagcatatat taattagcag gttgggctag 3000
agaaatcagc tgctatgcgg gttgattatt attattattt ctaatcctt tccttatttg 3060
ccttctactc cccttaact aatctaaaag ctctgttcca tgcaactgga gttccttatt 3120
cctctcttcc ccttccctta tatattgagg ctatggggta ggagaaaagt gcacaacca 3180
ccacccctt tactcgtgca ttaaaatttc ttatttacc ttttccccct tcccatttct 3240
tcccacttct atctacctt tctgggcaaa aaggarcct ttgstctctg tgnaccctaa 3300
gagcacactg cacagggaaa attggcccat ccagacctg gctccactct tgatctctct 3360
tggtcctct ctggctctt tctgggtgg n 3391

<210> 433

<211> 2553

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (2510)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (2516)

<223> n equals a,t,g, or c

<400> 433

```
ggcacgaggc atccctgacg ctctggatgt gagagtgcc caatgcctga cctctgcatc 60
ccccacccct ctcttccctt cctcttctcc agccaaagat ggtgctccct gcatcttcgg 120
tggtacgggtg taccgcagcg gagagtcctt ccagagcagc tgcaagtacc agtgcacgtg 180
cctggacggg gcggtgggct gcatgcccct gtgcagcatg gacgttcgtc tgcccagccc 240
tgactgcccc ttcccagga ggggtcaagct gcccgggaaa tgctgcgagg agtggggtgtg 300
tgacgagccc aaggaccaa ccgtggttg gcctgcccct gcgggtgagt cgagtcttcc 360
tctaagtcag ggtcgtgatt ctctcccagg gagggagtcc taactgtgcc gaccgaacgg 420
gggaaatacc ttatccaggc gttttacatg gtgtttgtgt gctctgcyct cgcrgcttac 480
cgactggaag acacgtttgg ccagagccca actatgatta gagccaactg cctgggtccag 540
accacagagt ggagcgcctg ttccaagacc tgtgggatgg gcatctccac ccgggttacc 600
aatgacaacg cctcctgcag gctagagaag cagagccgcc tgtgcatggt caggccttgc 660
gaagctgacc tggaagagaa cattaaggta catgttctgc tcctattaac tatttttcac 720
aggaaaaaca gtggatagga cccaacttag ggctcttgcc acgcttggtta gtataagccc 780
gttatctcca aaactatcta accattgagc tgttttgctg gaatgagagc ttgtgtaata 840
gcaaccacca gttttccact acgaaatctt ccacagggtt agttaattca agacattcca 900
agagaggctc tggctatttt kgggacatag caaatgagac tcaaacttcc tcccctcaa 960
atatwaacag aagtcagaca acagaagact aaaacamagr gggttgaaga aagscactcc 1020
tcttgtagag tcgstgattt tttttttcct ctctcttttc ccttgkcttc cttaagaagg 1080
gcaaaaagtg catccgtact cccaaaatct ccaagcctat caagtttgag ctttctggct 1140
gcaccagcat gaagacatac cgagctaaat tctgtggagt atgtaccgac ggccgatgct 1200
gcacccccca cagaaccacc accctgccgg tggagttcaa gtgccctgac ggcgagggtca 1260
tgaagaagaa catgatgttc atcaagacct gtgcctgcc ttacaactgt cccggagaca 1320
atgacatctt tgaatcgctg tactacagga agatgtacgg agacatggca tgaagccaga 1380
gagtgaagaa cattaactca ttagactgga acttgaactg attcacatct catttttccg 1440
taaaaatgat ttcagtagca caagttatth aaatctgttt ttctaactgg gggaaaagat 1500
tcccacccaa ttcaaaacat tgtgccatgt caaacaataa gtctatcaac ccagacact 1560
ggtttgaaga atgttaagac ttgacagtgg aactacatta gtacacagca ccagaatgta 1620
tattaagggtg tggcttttagg agcagtggga gggtagcagc agaaagggtta gtatcatcag 1680
atagcatctt atacgagtaa tatgcctgct atttgaagtg taattgagaa ggaaaatttt 1740
agcgtgctca ctgacctgcc tgtagcccca gtgacagcta ggatgtgcat tctccagcca 1800
tcaagagact gagtcaagtt gttccttaag tcagaacagc agactcagct ctgacattct 1860
gattcgaatg acactgttca ggaatcgga tcctgtcgat tagactggac agcttgtggc 1920
aagtgaatth gcctgtaaca agccagatth tttaaaatth atattgtaaa tattgtgtgt 1980
gtgtgtgtgt gtgtatatat atatatatgt acagttatct aagttaatth aaagtgtgtt 2040
gtgccttttt atttttgttt ttaatgcttt gatatttcaa tggttagcctc aatttctgaa 2100
caccataggt agaatgtaaa gcttgtctga tcgttcaaag catgaaatgg atacttatat 2160
ggaaattctg ctcagataga atgacagtc gtcaaaacag attgtttgca aaggggaggc 2220
```

```

atcagtgtcc ttggcaggct gatttctagg taggaaatgt ggtagcctca cttttaatga 2280
acaaatggcc ttattataaaa actgagtgc tctatatagc tgatcagttt tttcacctgg 2340
aagcatttgt ttctactttg atatgactgt ttttcggaca gtttatttgt tgagagtgtg 2400
accaaagtt acatgtttgc acctttctag ttgaaaataa agtgtatatt ttttctataa 2460
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa cggggaattn ccgganccgg 2520
tacctgccag gcgtacttgt catcagtgtt cac 2553

```

<210> 434

<211> 2532

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (2470)

<223> n equals a,t,g, or c

<400> 434

```

ggcgatttca tcatgctccg agccggggcgg cgcgcgcgcgc ttccgctcgcc accctctctg 60
gacagcccgag ggccgcagct catgccctct ccgcgtccag tgctgcttag aggtgctcgc 120
gccgctctgc tgctgctgct gccgccccgg ctcttagccc gaccctcgct cctgctccgc 180
cggctccctca gcgcggcctc ctgcgccccg atctccttgc ccgcgcgcgc ctcccggagc 240
agcatggacg gcgcgggggc tgaggaggtg ctggcacctc tgaggctagc agtgcgccag 300
caggagagtc ttgtgcgaaa actcaaagaa gataaagcac ccaaagtaga cgtagacaaa 360
gcagtggctg agctcaaagc ccgcaagagg gttctggaag caaaggagct ggcgttacag 420
cccaaagatg atattgtaga ccgagcaaaa atggaagata ccctgaagag gaggttttct 480
tatgatcaag cttttgctat ttatggaggt gttagtggtc tgtatgactt tgggccagtt 540
ggctgtgctt tgaagaacaa tattattcag acctggaggc agcactttat ccaagaggaa 600
cagatcctgg agatcgattg caccatgctc acccctgagc cagttttaaa gacctctggc 660
catgtagaca aatttgctga cttcatggtg aaagacgtaa aaaatggaga atgttttctg 720
gctgaccatc tattaaaagc tcattttacag aaattgatgt ctgataagaa gtgttctgtc 780
gaaaagaaat cagaaatgga aagtgttttg gccagcttg ataactatgg acagcaagaa 840
cttgcggtatc tttttgtgaa ctataatgta aaatctccca ttactggaaa tgatctatcc 900
cctccagtgt cttttaactt aatgttcaag actttcattg ggcctggagg aaacatgcct 960
gggtacttga gaccagaaac tgcacagggg attttcttga atttcaaacg acttttggag 1020
ttcaaccaag gaaagtgtcc ttttgctgct gccagattg gaaattcttt tagaaatgag 1080
atctcccctc gatctggact gatcagagtc agagaattca caatggcaga aattgagcac 1140
tttgtagatc ccagtggaga agaccacccc aagttccaga atgtggcaga cttcacctt 1200
tatttgtatt cagcaaaagc ccaggtcagc ggacagtccg ctcgaaaaat gcgcctggga 1260
gatgctgttg aacaggggtg gattaataac acagtattag gctatttcat tggccgcac 1320
tacctctacc tcacgaaggt tggaatatct ccagataaac tccgcttccg gcagcacatg 1380
gagaatgaga tggcccatga tgcctgtgac tggtgggatg cagaatccaa aacatcctac 1440
ggttggattg agattgttgg atgtgctgat cgttcctggt atgacctctc ctgtcatgca 1500
cgagccacca aagtcctact tgtagctgag aaacctctga aagaacccaa aacagtcaat 1560
gttgttcagt ttgaaccag taaggagca attggtaagg catataagaa ggatgcaaaa 1620
ctggtgatgg agtatcttgc catttgtgat gagtgttaca ttacagaaat ggagatgctg 1680
ctgaatgaga aaggggaatt cacaattgaa actgaaggga aaacatttca gttacaaaaa 1740
gacatgatca atgtgaagag attccagaaa acactatatg tggaagaagt tgttccgaat 1800
gtaattgaac cttccttcgg cctgggtagg atcatgtata cggatatttga acatacatte 1860
catgtacgag aaggagatga acagagaaca ttcttcagtt tccctgctgt agttgctcca 1920
ttcaaagtgt ccgtcctccc actgagccaa aaccaggagt tcatgccatt tgtcaaggaa 1980

```


368

```
ttatcggaag ccctgaccag gcatggagta tctcacaag tagacgattc ctctgggtca 2040
atcggaaggc gctatgccag gactgatgag attggcgtgg cttttgggtg caccattgac 2100
tttgacacag tgaacaagac cccccacact gcaactctga gggaccgtga ctcaatgcgg 2160
cagataagag cagagatctc tgagctgccc agcatagtcc aagacctagc caatggcaac 2220
atcacatggg ctgatgtgga ggccaggat cctctgtttg aagggaaga gactggtaaa 2280
aaagagacaa tcgaggaatg aggacaattt tgacaacttt tgaccacttg cgctaataaa 2340
aaaaaaaaa actactctta tgtccacttt acaaaagaaa acagcattgt gattactccc 2400
agggaccgta ttttatcttc agtggctgcc tgattttacc cccacaatta aagttgaagg 2460
aatcctgaan aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2520
aaaaaaaaa aa 2532
```

<210> 435

<211> 1822

<212> DNA

<213> Homo sapiens

<400> 435

```
ggctggcggc ggggtccggkt ccgctgcctg gcgctgcggg cggcgggcca tgggtggttg 60
gattgagccg ggcccggccg gggcgccgag tcggaggggg tggcagtga cggcggcaga 120
ggctacgggg ctcggtttgg ctgactgggg agtcggcagg cggcaggaac catgcgaggc 180
cagcggagcc tgetgctggg cccggcccg cctctgctcc gcctccttct gctgctgggt 240
tacaggcgcc gctgtccacc tctactccgg ggtctagtac agcgctggcg ctacggcaag 300
gtctgcctgc gctccctgct ctacaactcc tttgggggca gtgacaccgc tgttgatgct 360
gccttttrage ctgtctactg gctggtagac aacgtgatcc gctgggttgg agtgggttgc 420
gtggctcctg tgactgctgct gacaggctcc attgtagcta tcgcctacct gtgtgtcctg 480
cctctcatcc tccgaaccta ctcaagtcca cgactctgct ggcatcttct ctatagccac 540
tggaatctga tcctgattgt cttccactac taccaggcca tcaccactcc gcctgggtac 600
ccaccccagg gcaggaatga tatcgccacc gtctccatct gtaagaagtg catttaccac 660
aagccagccc gaacacacca ctgcagcatc tgcaacaggt gtgtgctgaa gatggatcac 720
cactgcccct ggctaaacaa ttgtgtgggc cactataacc atcggtactt cttctctttc 780
tgctttttca tgactctggg ctgtgtctac tgcagctatg gaagttggga ccttttccgg 840
gaggcttatg ctgccattga gaaaatgaaa cagctcgaca agaacaaact acaggcggtt 900
gccaacca cttatcacca gacccaccca cccaccttct ctttccgaga aaggatgact 960
cacaagagtc ttgtctacct ctggttcctg tgcagttctg tggcacttgc cctgggtgcc 1020
ctaactgtat ggcatgctgt tctcatcagt cgaggtgaga ctagcatcga aaggcacatc 1080
aacaagaagg agagacgtcg gctacaggcc aagggcagag tatttaggaa tccttacaac 1140
tacggctgct tggacaactg gaaggtattc ctgggtgtgg atacaggaag gactggctt 1200
actcgggtgc tcttaccttc tagtcaactg ccccatggga atggaatgag ctgggagccc 1260
cctccctggg tgactgctca ctcagcctct gtgatggcag tgtgagctgg actgtgtcag 1320
ccacgactcg agcactcatt ctgctcccta tgttatttca agggcctcca agggcagctt 1380
ttctcagaat ccttgatcaa aaagagccag tgggcctgcc ttaggggtacc atgcaggaca 1440
attcaaggac cagccttttt accactgcag aagaaagaca caatgtggag aaatcttagg 1500
actgacatcc ctttactcag gcaaacagaa gttccaaccc cagactaggg gtcaggcagc 1560
tagctaccta ccttgcccag tgctgacctg gacctcctcc aggatacagc actggagttg 1620
gccaccacct cttctacttg ctgtctgaaa aaacacctga ctagtacagc tgagatcttg 1680
gcttctcaac agggcaaaaga taccaggcct gctgctgagg tcaactgccac ttctcacatg 1740
ctgcttaagg gagcacaat aaaggtattc gattttttaa gawaaaaaaaa aaaaaaaaaa 1800
tttggggggg ggggccccgt ta 1822
```

<210> 436

<211> 1030

<212> DNA

<213> Homo sapiens

<400> 436

```
gttaaggctt ctgctgaaac tccccggccc caaccagtag acaaactgga gaagatcctg 60
gagaagctgc tgacccggtt cccacagtgc aataaggccc agatgaccaa cattcttcag 120
cagatcaaga cagcacgtac caccatggca ggcctgacca tggaggaact tatccagttg 180
gttgctgcac gactggcaga acatgagcgg gtggcagcaa gtactcagcc acttggtcgc 240
atccgggcct tgttccctgc tccactggcc caaatcagta cccaatggtt cttgccttct 300
gcccaagttt catatcctgg aaggcttca catgctccag ccacctgtaa gctatgtcta 360
atgtgccaga aactcgtcca gcccagttag ctgcatccaa tggcgtgtac ccatgtattg 420
cacaaggagt gtatcaaatt ctggggcccag accaacacaa atgacacttg tcccttttgt 480
ccaactctta aatgacggac ctgactgggg aggaagaaga agagaaactg atgtgaacag 540
gaagcgcggg ttcaagattt ctaaaactct atatttatac agtgacatat actcatgccca 600
tgtacatttt tattatatag gtaatgtgtg tatagaaagt ctgtattcca atgttcgtaa 660
atgaaactat gtatattatg cagaaacagt ctgttcccc tcactcttgca attcctttgg 720
gggatgcaga ttgtagggaa gatgatgttt agtttggcct tgaaattatg atatccctgc 780
ccagggtgtg tttcaaatac aatataaaaa ccacctagga acctgctgtt gctctaaggc 840
cattctgctt tggtttggt cagcctctag tccatttctt taaggctcat gtatgcagat 900
ttaaagcctg gtgtccacc actgtccaac cagatgcctt gcttaccgaa agcctccaga 960
agcctcagta ttgttttagc cactctactc caaatggata aaatgagact ctgattgagg 1020
aaaaaaaaag 1030
```

<210> 437

<211> 1632

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (14)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1602)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1616)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1617)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1628)

<223> n equals a,t,g, or c

<400> 437

```
ggcctgtggc tgtnggccgc gtgcgggtga ccgccgaggg ccgaracatg gttctgcaga 60
cgaccaaggg gctgcggctt ctctttgatg gcgatgccca cctcctcatg tccatcccca 120
gcccccttccg tggacggctc tgtggcctct gtgggaactt caatggcaac tggagtgcag 180
actttgtcct gcccaatggc tcagcagcgt ccagtgtgga gaccttcggg gctgcatggc 240
gggygcccg ctcctccaag ggctgtggcg agggctgcgg gcccgaaggc tgcccagtg 300
gcttggcaga ggagactgca ccctatgaga gcaacgaggc ctgcgggcag ctccggaacc 360
cccagggccc cttcgcgacc tgccaggcgg tgctgagtc cctctgagta ttccgccaat 420
gcgtatacga cctgtgcgcg caaaaggggtg acaaagcctt cctgtgccgc agcctggcag 480
cctacacggc ggcctgtcag gcagctggcg tggccgtgaa gccctggagg acagacagct 540
tctgcccgt ccttggcccc gccacagcc actactccat ctgcactcgc acctgccagg 600
gatcctgtgc ggctctctcc ggcctcacgg gctgcaccac ccgctgtttt gagggtgtg 660
agtgcgacga ccgyttcctg ctttcccagg gtgtctgcat ccctgtccaa gattgtggct 720
gcacccataa tggccgatac ttgccggtaa actcctccct gctgacctca gactgcagcg 780
agcgtgttc ctgttctca agctctggcc tgacatgccca ggcagctggc tgcccaccag 840
gccgtgtatg tgaggtcaag gctgaagccc ggaactgctg ggccaccgt ggtctctgtg 900
tcctgtctgt gggtgccaa ctcaccacct ttgatggggc ccgtggtgcc accacctctc 960
ctggtgtcta tgagctctct tcccgtgcc caggactaca gaataccatc ccctggtacc 1020
gtgtagttgc cgaagtccag atctgccatg gcaaacgga ggctgtgggc caggtccaca 1080
tcttctcca ggatgggatg gtgacgttga ctccaaacaa ggggtgtgtg gtgaatggtc 1140
tccgagtga tctccagct gagaagttag catctgtgtc cgtgagtcgt acacctgatg 1200
gtccctgtct agtccgccag aaggcagggg tccaggtgtg gcttgagcc aatgggaagg 1260
tggctgtgat tgtcagcaat gacctgctg ggaactgtg tggggcctgt ggaaactttg 1320
acggggacca gaccaatgat tggcatgact cccaggagaa gccagcgatg gagaaatgga 1380
gagcgcagga cttctcccca tgttatggct gatcagtcac ccaccaggaa cgaagatttc 1440
ctgaagaaga cctggtccct ctggaggttg crgtggctga aggatgcac atgtgctcct 1500
accctgctct accgcttttc tgggtcacag aggccaaatg tgagagcatt gaataaatat 1560
cttaagctaa aaaaaaaaaa raaaaagggc cgataagggc anagggccct tggcannag 1620
attcccgntt cc 1632
```

<210> 438

<211> 1016

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (27)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (993)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (994)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (995)

<223> n equals a,t,g, or c

<400> 438

```
actcgtgccg aattcggcac gagcggncac gagcaagccc catctcatcc tggcacgccc 60
tactccactg ccctggcagc agcagggtgtg gccaatggag ggggggtgctg gcccccagga 120
ttcccccagc caaactgtct ttgtcaccac gtgggggtca cttttcatcc ttccccaaact 180
tccctagtag ccgtactagg ttggacagcc cccttcgggt acaggaaggc aggaggggtg 240
agtcccctac tccctcttca ctgtggccac agcccccttg ccctccgcct gggatctgag 300
tacatattgt ggtgatggag atgcagtcac ttattgtcca ggtgaggccc aagagccctg 360
tgggcgccac ctgagggtgg ctgggggtgc tcccctaacc ctactttgct tccgccactc 420
agccatttcc ccctcctcag atggggcacc aataacaagg agctcaccct gcccgctccc 480
aacccccctc ctgctcctcc ctgcccccca aggttctggt tccatttttc ctctgttcac 540
aaactacctc tggacagttg tgttgttttt tgttcaatgt tccattcttc gacatccgtc 600
attgctgctg ctaccagcgc caaatgttca tcctcattgc ctctgttct gccacgac 660
ccctccccc agatactctt tgtggggaag aggggctggg gcatggcagg ctgggtgacc 720
gactaccccc gtcccaggga aggtggggcc ctgcccctag gatgctgcag cagagtgagc 780
aagggggccc gaatcgacca taaagggtgt agggggccacc tcctccccct gttctgttgg 840
ggaggggtag ccatgatttg tcccagcctg gggctccctc tctggtttcc tatttgagc 900
tacttgaata aaaaaaatat ctttttctgg aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 960
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aannnggggg gggccccccc ccccca 1016
```

<210> 439

<211> 594

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (476)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (519)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (530)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (531)

<223> n equals a,t,g, or c

<220>

<221> misc feature
<222> (539)
<223> n equals a,t,g, or c

<400> 439

```
ttgaaaaaacg ggtcgactgg cmcgwccsgc ccggagccag cggttctcca agcaccacgc 60
atcctgctag acgcgccgcg caccgacgga ggggacatgg gcagagcaat ggtggccagg 120
ctcgggctgg ggctgctgct gctggcactg ctccctacca cgcagattta ttccagtga 180
acaacaactg gaacttcaag taactcctcc cagagtactt ccaactctgg gttggcccca 240
aatccaacta atgccaccac caaggygggt ggtggtgccc tgcagtcaac agccagtctc 300
ttcgtggtct cactctctct tctgcatctc tactcttaag agactcaggc caagaaacgt 360
cttctaaatt tccccatctt ctaaacccaa tccaaatggc gtctggaagt ccaatgtggc 420
aaggaaaaac aggtcttcat cgaatctact aattccacac cttttaaaaa ttttnggga 480
acccaacca aagggtaaaa aaaaaaaaaa atttggggnt ttttttgggn naaaggggna 540
aaaaaaattt ttcccccccc ccccaaaaaa aaaaaaaaat tttttttttt tttt 594
```

<210> 440
<211> 1580
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (873)
<223> n equals a,t,g, or c

<400> 440

```
gcccacgcgt tcgcaaggct gcccctctg gcgctgatta tcctgctgct gccgccaccg 60
ctgctgctgc tctgcaaaat tcagctgctg cctctgtctt gaggacccca gcgcctttcc 120
cccggggcca tctgctctgc agccacagcc tcctctctgg ggccctcct cactgcctgc 180
gccctgctgc cttttgcccc gggccagacc cccaactaca ccagaccctg gttcctgtgc 240
ggaggggatg tgaaggggga atcaggttac gtggcaagtg aggggttccc caacctctac 300
ccccctaata aggagtgcac ctggaccata acggtccccg agggccagac tgtgtccctc 360
tcattccgag tcttcgacct ggagctgcac cccgcctgcc gctacgatgc tctggaggtc 420
ttcgtgggt ctgggacttc cggccagcgg ctcgagcgt tttgtgggac cttccggcct 480
gcgcccctag tcgcccccg caaccagggt accctgagga tgacgacgga tgagggcaca 540
ggaggacgag gcttcctgct ctggtacagc gggcgggcca cctcgggcac tgagcaccaa 600
ttttgcgggg ggcggtgga gaaggcccag ggaaccctga ccacgcccga ctggcccag 660
tccgattacc ccccgggcat cagctgttcc tggcacatca tcgcgcccc ggaccaggtc 720
atcgcgctga ccttcgagaa gtttgacctg gagccggaca cctactgccg ctatgactcg 780
gtcagcgtgt tcaacggagc cgtgagcgac gactcccgga ggctggggaa gttctgcggc 840
gacgcaktcc cgggtccat ctctccgaa ggnaatgaac tcctcgtcca gttcgtctca 900
gatctcagtg tcaccgctga tggcttctca gcctcctaca agaccctgcc gcggggcact 960
gccaaagaag ggcaagggcc cggccccaaa cggggaactg agcctaaagt caagctgccc 1020
cccaagtccc aacctccgga gaaaacagag gaatctcctt cagcccctga tgcaccacc 1080
tgcccaaagc agtgccgccg gacaggcacc ttgcagagca acttctgtgc cagcagcctt 1140
gtggtgactg cgacagtga gtccatggtt cgggagccag gggaggccct tgcctgact 1200
gtcagcttta ttggtgctta taaaactgga ggactggacc tgccttctcc acccactggt 1260
gcctccctga agttttacgt gccttgcaag cagtgcctcc ccatgaagaa aggagtcat 1320
tatctgctga tgggcccagg agaagagaac agaggccccg tccttctctc agagagcttt 1380
gtggttctcc accggcccaa ccaggaccag atcctcacca acctaaagcaa gaggaagtgc 1440
```

ccctctcaac ctgtgcgggc tgctgcgtcc caggactgag acgcaggcca gccccggccc 1500
ctagccctca ggccttcttt cttatccaaa taaatgtttc ttaatgagga atgggtcaga 1560
tctccatgct tatggtaaaa 1580

<210> 441
<211> 1082
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (136)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (462)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (465)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1074)
<223> n equals a,t,g, or c

<400> 441
ctgccgagcg cctcttgagg ctgggctttc ccccgcggtg cggcgccagg agccgccttt 60
tccgctgggt gtcactcggg ggtggggaag atggcccatt caaaagcgcc gcgagggggc 120
ccggccagtg cccttnagtg agcgctcgca agaggacggc agaggcccgg cagctcggag 180
ctccgggacc ttgtggcgca tcaggacgag gctgtccctc tgccgggacc cagagccgcc 240
gccgcccgtc tgccctcctg gtgttagcct cctctgcgag ctccgggag gcggccgtgg 300
gagccgctgg ggcgaggacg gcgcgaggct gctgctgctg cccccggccc gcgcggctgg 360
aaacggagag gccgagccaa gcggcgggcc ctcttatgct gggaggatgc tggagagtag 420
cggctgcaaa gcgctgaagg agggcggtgt ggagaagcgc anacngggtt gttgcagctc 480
tggaagaaaa agtgttgcat cctcaccgag gaagggtgc tgcttatccc gcccaagcag 540
ctgcaacacc agcagcagca gcaacagcag cagcagcagc agcaacaaca gcccgggag 600
gggcccggcc agccgtccca acccagtggc cccgctgtcg ccagcctcga gccgcccgtc 660
aagctcaagg aactgcactt ctccaacatg aagaccgtgg actgtgtgga gcgcaagggc 720
aagtacatgt acttcactgt ggtgatggca gagggcaagg agatcgactt tcggtgcccg 780
caagaccagg gctggaacgc cgagatcacg ctgcagatgg tgcaagtaca gaatcgtcag 840
gccatcctgg cgggtcaaac cagcgggcag aagcagcagc acctggtcca gcagcagccc 900
ccctcgagc cgcagccgca gccgcagctc cagccccaac cccagcctca gcctcagccg 960
caacccagc cccaatcaca accccagcct cagccccaac ccaagcctca gcccagcag 1020
ctccamccgt atycgcatyc amattcamat ycamaatctt atccttmatt tggnaaccaa 1080
aa 1082

<210> 442

<211> 1241

<212> DNA

<213> Homo sapiens

<400> 442

```
agacgagcgt ggcgggccgcg gctgctcggg gccgcgctgg ttgccattg acagcggcgt 60
ctgcagctcg cttcaagatg gccgcttget cgcattcatt ttctgctgaa cgacttttaa 120
ctttcattgt cttttccgcc cgcttcgatc gcctcgsgcc ggctgctctt tccgggattt 180
tttatcaagc agaaatgcat cgaacaacga gaatcaagat cactgagcta aatccccacc 240
tgatgtgtgt gctttgtgga gggacttca ttgatgccac aaccataata gaatgtctac 300
attccttctg taaaacgtgt attgttcgtt acctggagac cagcaagtat tgcctattt 360
gtgatgtcca agttcacaag accagaccac tactgaatat aaggtcagat aaaactctcc 420
aagatattgt atacaaatta gttccagggc ttttcaaaaa tgaaatgaag agaagaagg 480
atthttatgc agctcatcct tctgctgatg ctgccaatgg ctctaataa gataaggag 540
aggttgcaga tgaagataag agaattataa ctgatgatga gataataagc ttatccattg 600
aattctttga ccagaacaga ttggatcgga aagtaaaaca agacaaagag aaatctaagg 660
aggaggtgaa tgataaaaga tacttacgat gccagcagc aatgactgtg atgcacttaa 720
gaaagtthct cagaagtaaa atggacatac ctaatacttt ccagattgat gtcattgatg 780
aggaggaacc tttaaaggat tattatacac taatggatat tgcctacatt tatacctgga 840
gaaggaatgg tccacttcca ttgaaataca gagttcgacc tacttgtaaa agaatgaaga 900
tcagtcacca gagagatgga ctgacaaatg ctggagaact ggaaagtga tctgggagt 960
acaaggccaa cagcccagca ggaggtattc cctccacctc ttcttgtttg cctagcccca 1020
gtactccagt gcagtctcct catccacagt ttcttcacat ttccagtact atgaatggaa 1080
ccagcaacag ccccgcggt aaccaccaat cttcttttgc caatagacct cgaaaatcat 1140
cagtaaatgg gtcattcagca acttcttctg gttgatacct gagactgtta aggaaaaaaa 1200
aaaaaaaaa accccgggccg ctcccacttc agattggtaa c 1241
```

<210> 443

<211> 968

<212> DNA

<213> Homo sapiens

<400> 443

```
cccacgcgtc cgcaggaagc caactatttg aaatgcacga gaaactaagt tgtatggcaa 60
actctgtaat aaaaaatcta cagtcacgtt ggagatcacc atcccatgaa aattctattt 120
agtattttca gagaaaattg aaggtttttt taaacatcac tggatttctt gattgaggaa 180
acaagtthct aaataatagc acaatttcaa agaagagact ctttgcaaag ttgataacat 240
ttcaaacctt gaaggacagt gacttattat gtwagttcaa tkttgtaagt ycattatgtw 300
agatcctttt tttttttcat aatatgtatt ctggctgct atgctggtt tttcaggaaa 360
tttaattatc ttactgagat gtgaaagcaa aactagtaac agaacttaca ttttatttca 420
tgctttctta aaccctgca tattctggtg aaacatgtaa aatacttta gtaaaattga 480
acatttttat ttgaattttt gctgaactga taaagggtgt tatatttttg tttgttkgtt 540
tgtttaattc atgtttgttg ggactgaggt ttaggaagtt tgttactggt taaaacctc 600
aatgaaatg cgaaagaatt tgaatttttc ctgcatatgt caactttgga cagctttcaa 660
gaaaaatgag aaaagtthca acttctggcg gttaaaatat taatgcagaa tttactaaga 720
ttttattcat ttgcattagc aaatattcat gcagcagcag ttgactgaaa atttattctt 780
atgagacgta tagtattcat ttttaaatgc attatgtata gacgacaatg 840
tttttaattt ataaatttca ttctttgtta attgcatggg ttttctgca gcttattgtg 900
aataccttgg ttctgttcaa tagaaacatt ttgtatatat traatactga aatatcaaaa 960
aaaaaaaaa 968
```

<210> 444
<211> 1360
<212> DNA
<213> Homo sapiens

<220>
<221> misc feature
<222> (114)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (302)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (330)
<223> n equals a,t,g, or c

<400> 444
cgccggagcg tcactctgcga ctccaatgcc actgcactgg agcttcccgg ccttcctctt 60
tccctgcccc agcccagcat ccccgcggt gtccgcgaga gtgctccacc gganccccac 120
cggaagaga ccgtgaccgc caccgccact tcccaggtag ccagcagcc tccagccgct 180
gcccgccttg gggaacaggc cgtcgcgggc cctgcccctc gactgtcccc agcagtacca 240
gcaaagaccg cccagtgtcc cagcctagcc ttgtggggag caaagaggag ccgccgccgg 300
angaaagtgg cagcggcggc gcaagcgcmn aaggagccac aggaggaacg gagccagcag 360
caggatgata tcgaagagct ggagaccaag gccgtgggaa tgtctaacga tggccgcttt 420
ctcaagtttg acatcgaaat cggcagaggc tcctttaaga cggctctaca aggtctggac 480
actgaaacca ccgtggaagt cgcctggtgt gaactgcagg atcgaaaatt aacaaagtct 540
gagaggcaga gatttaaaga agaagctgaa atgttaaaag gtcttcagca tccaatatt 600
gttagatttt atgattcctg ggaatccaca gtaaaaggaa agaagtgcag tgttttggtg 660
actgaactta tgacgtcttg aacacttaaa acgtatctga aaaggtttaa agtgatgaag 720
atcaaagttc taagaagctg gtgccgtcag atccttaaag gtcttcagtt tcttcatact 780
cgaactccac ctatcattca ccgcgatctt aaatgtgaca acatctttat caccggccct 840
actggctcag tcaagrttg agacctcgt ctggcaaccc tgaagcgggc ttcttttgcc 900
aagagtgtga taggtacccc agagttcatg gcccttgaga tgtatgagga gaaatatgat 960
gaatccgttg acgtttatgc ttttgggatg tgcattgctg agatggctac atctgaatat 1020
ccttactcgg agtgccaaaa tgctgcgcag atctaccgtc gcgtgaccag tgggggtgaag 1080
ccagccagtt ttgacaaagt agcaattcct gaagtgaagg aaattattga aggatgcata 1140
cgacaaaaca aagatgaaag atattccatc aaagacctt tgaaccatgc cttcttccaa 1200
gaggaaacag gactacgggt agaattagca gaagaagatg atggagaaaa aatagccata 1260
aaattatggc tacgtattga agatattaag aaattaaagg gaaaatacaa agataaaaaa 1320
aaaaaaaaaa aaaaaaaaaa aaaaaacacc caccgtgccg 1360

<210> 445
<211> 1835
<212> DNA
<213> Homo sapiens

<220>

<221> misc feature
<222> (326)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1229)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1738)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1747)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1758)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1801)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1806)
<223> n equals a,t,g, or c

<220>
<221> misc feature
<222> (1831)
<223> n equals a,t,g, or c

<400> 445
tcgacccacg cgtccgggat gaggcccggc ctctcatttc tcctagccct tctgtttcttc 60
cttggccaaag ctgcagggga tttgggggat gtgggacctc caattcccag ccccggtctc 120
agctctttcc caggtgttga ctccagctcc agcttcagct ccagctccag gtcgggctcc 180
agctccagcc gcagcttagg cagcggaggt tctgtgtccc agttgttttc caatttcacc 240
ggctccgtgg atgaccgtgg gacctgccag tgctctgttt ccctgccaga caccamcttt 300
cccgtggaca gagtggaacg yttggnaatt cacagctcat gttctttctc agaagtttga 360
gaaagaactt tccaaagtga gggaaatatgt ccaattaatt agtgtgtatg aaaagaaact 420
gttaaacctta actgtccgaa ttgacatcat ggagaaggat accatttctt aactgaact 480
ggacttcgag ctgatcaagg tagaagtga ggagatggaa aaactggtca tacagctgaa 540
ggagmstttt ggtggaagct cagaaattgt tgaccagctg gaggtggaga taagaaatat 600
gactctcttg gttagagaagc ttgagacact agacaaaaac aatgtccttg ccattcgcgc 660

```

agaaatcgtg gctctgaaga ccaagctgaa agagtgtgag gcctctaaag atcaaaacac 720
ccctgtcgtc caccctcctc ccactccagg gagctgtggt catgggtggtg tgggtgwacat 780
cagcaaaccg tctgtggttc agctcaactg gagagggttt tcttatctat atgggtgcttg 840
gggtagggat tactctcccc agcatccaaa caaaggactg tattgggtgg cgccattgaa 900
tacagatggg agactggttg agtattatag actgtacaac acactggatg atttgctatt 960
gtatataaat gctcgagagt tgcggatcac ctatggccaa ggtagtggtg cagcagttta 1020
caacaacaac atgtacgtca acatgtacaa caccgggaat attgccagag ttaacctgac 1080
caccaacacg attgctgtga ctcaaactct ccctaagtct gcctataata accgcttttm 1140
atatgcta atgtgcttggc aagatattga ctttctgtg gatgagaatg gattgtgggt 1200
tattttattca actgaagcca gcactggtta catggtgatt agtaaaactca atgacaccac 1260
acttcagggtg ctaaactctt ggtataccaa gcagtataaa ccactctgctt ctaacgcctt 1320
catggtatgt ggggttctgt atgccacccg tactatgaac accagaacag aagagatttt 1380
ttactattat gacacaaaca cagggaaga gggcaaaacta gacattgtaa tgcataagat 1440
gcaggaaaaa gtgcagagca ttaactataa cccttttgac cagaaacttt atgtctataa 1500
cgatggttac cttctgaatt atgatcttct tgtcttgacg aagccccagt aagctgttta 1560
ggagttaggg tgaaagagaa aatgtttggt gaaaaaatag tcttctccac ttacttagat 1620
atctgcaggg gtgtctaaaa gtgtgttcat tttgcagcaa tgtttargtg catagttcta 1680
ccactactaga gatctaggac atttgtcttg atttggtgag tctcttgggg atcatctngc 1740
ytttcangcg cmttttgnca taaagtcygt cyagggtggg attgtcagag gtctaggggc 1800
ncttgnnggc ctaatggaac cttctgtga ngaag 1835

```

<210> 446

<211> 1355

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (55)

<223> n equals a,t,g, or c

<400> 446

```

ggcagcagcg cgtcgcacgg gaagtcgaag cggagatccc ggggtcgcgc gaganccgca 60
agcggagttg gtggcgcta tgctatcacc cgaggcagag cgagtgtgc ggtaccttgt 120
agaagtggag gagctcgccg aggaggtgct ggcggacaag cggcagattg tggacctgga 180
cactaaaagg aatcagaatc gagagggcct gagggccctg cagaaggatc tcagcctctc 240
tgaagatgtg atggtttgct tcgggaacat gtttatcaag atgcctcacc ctgagacaaa 300
ggaaatgatt gaaaaagatc aagatcatct ggataaagaa atagaaaaac tgcggaagca 360
acttaaagtg aaggtcaacc gcctttttga ggcccaaggc aaaccggagc tgaagggttt 420
taacttgaac ccctcaacc aggatgagct taaagctctc aaggtcatct tgaaaggatg 480
agactcaaga accaagatgg gggaccagca acccccagag gtcattggag acccaggacc 540
ctccaacctt gacacctgta aggacaggat ctgccctgta agggccagcc gtcaggaatc 600
tggccatgaa aacctctttg tagtgcttg ctactctgtg atggcaggag ggaaccttca 660
gcctgtctgg ctgctggacc tggacaccag ggctcgggtg acacaagatc tattgacggg 720
ccttggtagc caccagtggg tgtgtggggc agtggctgtg ggggtgtaag aatgactgca 780
acaggcactt cccaacaatg gcctgctgtt cacatggacc ctgagcaagg aaggaggag 840
ggaggggcag agtggagtgt cattccagca ttctctcag aaggagaga ggttttcagg 900
ctggtgccat gcgattggaa taaagcagga ggctcatggg tggttgctga atgaagaaca 960
gaattcttgt gctttgtggc tcaccacaga catctgtggg gcaggcacac acacctcccg 1020
ccagctccaa ttttgacctt ttccctgct tgattccaag agtaggtgct gcctagcagc 1080
ccttcgtggc cactctttac tcaggagggc cttgcagagt cctgcaccag gcctgggtga 1140

```

```

gtggatgcgc ctcttaccat atgacacgtg tcaagatgcc cttccgcccc ctctgaaagt 1200
ggggcccggc cagcactgct cgttactgtc tgccttcagt ggtctgaggt cccagtatga 1260
actgccgtga agtcaaaact cttatgtgtt cattaagggc tcaataaatg ttagctgaat 1320
gaawaaaaaa aaaaaaaaaa amawaaaaaa aaaaaa 1355

```

<210> 447

<211> 375

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (153)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (313)

<223> n equals a,t,g, or c

<400> 447

```

tgcctctgtg tgtgtgcaag acagagagat aggctatttg tcaagtcagc tagttgccta 60
ggtatctttg tctcacatct ggctgtttcc tcctagagaa ccatccagtt ggctttccag 120
gtctggaggt gagctaattg atgagtgaat atnagcagtg ggtgttcctc atctctttga 180
ggatttgcct cagagttcac taccaaggga tttctggaac taggwgccat tctttacatc 240
agttcttgag ggttctttga tatcaggggc aaaatgatcc cttctctttt ctttcttata 300
tcctgtgctt tgnctcctgg gtgatttctc ttcaagtcag ttgtgggagg tgcctaggaa 360
caacgctaac acggg 375

```

<210> 448

<211> 1393

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1360)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1383)

<223> n equals a,t,g, or c

<400> 448

```

tctttttacat gtttaaattt aaaccattct tcgtgacccc ttttcttggg agattcatgg 60
caagaacgag aagaatgatg gtgcttgta ggggatgtcc tgtctctctg aactttgggg 120
tcctatgcat taaataattt tcctgacgag ctcaagtgtc ccctctgggc tacaatccct 180
ggcggtggtc cttcatccct tgggcaagca ttgcatacag ctcatggccc tccctctacc 240
ataccctcca ccccggttcg cctaagctcc cttctccggg aatttcatca tttcctagaa 300
cagccagaac atttgtgggc tatttctctg ttagtggtta accaaccatc tgttctaaaa 360

```

gaagggctga actgatggaa ggaatgctgt tagcctgaga ctcaggaaga caacttctgc 420
agggtcactc cctggcttct ggaggaaaga gaaggagggc agtgctccag tggtagagaa 480
gtgagacata atggaatcag gcttcacctc caaggacacc tatctaagcc attttaaccc 540
tcgggattac ctagaaaaat attacaagtt tgggtctagg cactctgcag aaagccagat 600
tcttaagcac cttctgaaaa atcttttcaa gatattctgc ctagacggtg tgaagggaga 660
cctgctgatt gacatcggct ctggcccccac tatctatcag ctcctctctg cttgtgaatc 720
ctttaaggag atcgtcgtca ctgactactc agaccagaac ctgcaggagc tggagaagtg 780
gctgaagaaa gagccagagg cctttgactg gtccccagtg gtgacctatg tgtgtgatct 840
tgaagggaac agagtcaagg gtccagagaa ggaggagaag ttgagacagg cgggtcaagca 900
ggtgctgaag tgtgatgtga ctcagagcca gccactgggg gccgtcccct tcccccggc 960
tgactgcgtg ctcagcacac tgtgtctgga tgccgcctgc ccagacctcc ccacctactg 1020
cagggcgctc aggaacctcg gcagcctact gaagccaggg ggcttcctgg tgatcatgga 1080
tgcgctcaag agcagctact acatgattgg tgagcagaag ttctccagcc tccccctggg 1140
ccgggaggca gtagaggctg ctgtgaaaga ggctggctac acaatcgaat ggtttgagg 1200
gatctcgcaa agttattctt ccaccatggc caacaacgaa ggacttttct ccctgggtggc 1260
gaggaaactg agcagacccc tgtgatgcct gtgacctcaa ttaaagcaat tcctttgacc 1320
tgtcaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1380
aanaaaaaaa aaa 1393

<210> 449

<211> 1663

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (57)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (180)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (621)

<223> n equals a,t,g, or c

<400> 449

aaagaacggg ggtgatgtgg ttccacaata ttacaaggac cccaaaaagc tctgcgnaga 60
ggacttgag aagttggtga ccagggtaaa agtaggcagc gagccagcaa aagactgttt 120
gccagcaaaag ccctcagagg ccacctcaga ccggtcagag ggcagcagcc gggacgcagn 180
ggtagcgacg agaacgagga gtcgagcgtt gtggattacg tggaggtgac ggtcggggag 240
gaggatgcga tctcagatag atcagatagc tggagtcagg ctgcggcaga aggtgtgtcg 300
gaactggctg aatcagactc cgactgcgtc cctgcagagg ctggccaggc ctagacaggg 360
aagtctgtta gaactgctgt gctgatcaac gggacgctcc gtctttgaag aaagaagaga 420
tggctctctc ccagccatgg gccacccttg ccagtractc caagtggaac tacttagctc 480
gcgtgtgcct ggarggtgcg ggaagtccag cgactctcag acgcacctcc cagaggaccg 540
gtgggaattg ttcatagtgc caaagtccta mtactgcgtt ttcaatgggt ccttgtacat 600
agtttgctcc tctgscctag ncctcacctc ttgctatact ggraccgatt tgtacaatgt 660

380

```
gggaattttg ttaccytttt aatcaagggc aacttccttt tccagcacta ccattgtaag 720
gttkttttca ggaggaggagg staaccacct tgcttttctc ttttctcttt ttcttttttt 780
tatttttggt ttattaattt ggggaaaggg gtgttagcat tagtgccatg atatctactg 840
gattttaagt agggagactt tatttttaaa ggtaggttga aatttgggag atttctcggc 900
aggaagggtc gaaatccagg cccctgtctc aacttggaga gaggtgacag acggcagatc 960
ttccaaatca aattcctttc cagtctctcc cctggctgcc tttttggggg tccctgcctt 1020
agccccacac aaggctttct gaactgcca gaggggatct ggcttctcaa ctgctcggcc 1080
tcttgggcag gctgtgcca gccagccctg ggagaactgg gtagcagggtg gctgacttct 1140
ttaagcacct ttctaaatac cagcagaaga ggctcccgcc tctgttagca tgatcagtac 1200
tattgtgaca ttaaaacaac aacaataaga tcttcctatc tggagggtac agagggtgaat 1260
ggctttggtt ttcatttctc ttcttctactg ctttttctcg gtgtggtatt tgacaagatt 1320
ttagctcaaa gcctcaccat gaattgattt tttttgtttg tgtgtgtgtt tgttttggga 1380
caattttaga tacctgagtg cactttttca gttagtccta acttttaaaa gaaggaaaac 1440
caagagacat atctggtgta cgtgttgca gtagaactct ggttgcaatc cctccccctc 1500
ccacactgcc ccccatattga gtacrcgcga caagtcaaac gctaggaagt ttgaataaaa 1560
ccaatttttc taacttgttg ctcatattgt gtaactcaat aaagcaaaga ctaaactttt 1620
ttataaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 1663
```

<210> 450

<211> 1380

<212> DNA

<213> Homo sapiens

<400> 450

```
gggtcgaccc acgcgtccgg caccatgcgc gcagcagcca tctccactcc aaagttagac 60
aaaatgccag gaatgttctt ctctgctaac ccaaaggaat tgaaaggaac cactcattca 120
cttctagacg acaaaatgca aaaaaggagg ccaaagactt ttggaatgga tatgaaagca 180
tacctgagat ctatgatccc acatctggaa tctggaatga aatcttccaa gtccaaggat 240
gtactttctg ctgctgaagt aatgcaatgg tctcaatctc tggaaaaact tcttgccaac 300
caaactggtc aaaatgtctt tggaagtttc ctaaagtctg aattcagtga ggagaatatt 360
gagttctggc tggcttgtga agactataag aaaacagagt ctgatctttt gccctgtaaa 420
gcagaagaga tatataaagc atttgtgcat tcagatgctg ctaaacaaat caatattgac 480
ttccgcactc gagaatctac agccaagaag attaaagcac caacccccac gtgttttgat 540
gaagcacaaa aagtcatata tactcttatg gaaaaggact cttatcccag gttcctcaa 600
tcagatattt acttaaatct tctaaatgac ctgcaggcta atagcctaaa gtgactggtc 660
cctggctgaa gggaattaac agatagtatc aagcgcagaa ggaatgtgcc agtatggctc 720
cctgggtgaa cagcttggcc ttttttgggt gtcttgacag gccagaaga acaaatgact 780
cagaatggat taacatgaaa gttatccagg cgcagagttg aagaagcata agcaagacaa 840
aaacagagag accgcagaag gaggaagata ctgtgttact gtcataaaaa acagtggagc 900
tctgtattag aaagcccctc agaactggga aggccaggta actctagtta cacagaaact 960
gtgactaaag tctatgaaac tgattacaac agactgtaag aatcaaagtc aactgacatc 1020
tatgctacat attattatat agtttgactt gagctattga agtcccatta acttaaagta 1080
tatgttttca aattgccatt gctactattg cttgtcgggtt ttattttatt ttattgtttt 1140
tgactttgga agagatgaac tgtgtattta acttaagcta ttgctcttaa aaccaggagg 1200
tcagaatata tttgtaagtt aaatcattgg tgctaataat aaatgtggat tttgtattaa 1260
aatatataga agcaatttct gtttacatgt ccttgctact tttaaaaact tgcatttatt 1320
cctcagattt taaaaataaa taaataattc atttaaaaaa aaaaaaaaaa aaaactcgag 1380
```

<210> 451

<211> 926

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (687)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (865)

<223> n equals a,t,g, or c

<400> 451

```
gttgcatctt cttgctgtcc tagaaaaaat gatttcacag ggtaacaata acaaaaatgg 60
aaagaatgag actggtaata acaacaacaa agatggatct aatcataaag ctgaaagtgg 120
agctctaata gaagctgcaa aatcaaagat acatcagtac aaagtacgag cttatatcca 180
aatgaagtct ctgaaagcat gtaaaaggga aatcaagtca gtcatagaata cagctggaaa 240
ttccgcaccc tctctctttc ttaaaagcaa ttttgagtac ttaagaggta attatcgaaa 300
agccgtgaag ctattaaata gttcaaacat tgctgagcat ccaggattca tgaaaacagg 360
tgaatgcttg agatgcatgt tctggaataa ccttggttgc atccattttg ccatgagcaa 420
gcacaatttg ggaatattct actttaaaaa ggctctgcaa gagaatgaca atgtctgtgc 480
acagctcagt gcaggtagca ctgatccagg taaaaaattt tcaggaagac ccatgtgtac 540
gttactaacc aataagagat atgagttgct gtataactgt ggaattcagc ttcttcacat 600
tggaaggcct cttgctgcct tcgaatgtct gattgaagct gttcagggtt atcatgcaaa 660
tcctcgctc tggctacggc tggctgnaat gctgcattgc tgccaataag gggacttctg 720
aacaagaaac taaaggcctt cccagcaaaa aaggaattgt acagtctatt gttggkcaag 780
gctatcatcg taaaatagtt ttggcatcac agtctataca gaatactgtt tatraatggg 840
ggggcagctc tcggccattc ctgtnagcca gtatgggagt tttgcagccc atatgttctc 900
agaaatgcct ggtttgctgg ttacct                                     926
```

<210> 452

<211> 1642

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (147)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (150)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1608)

<223> n equals a,t,g, or c

<400> 452

```

ggcacgaggc gcgagaggac gtgctctgcc agccagtggg aaggcaggcc gcgcgcgcgg 60
gagcgcggga ggatcggcgg ctcgcggtca ctggctccctg gctcgggtcc ccgcaccccg 120
gggctcacac ttaccgcgcg ggaggancan cggccgggtg tccaccccca tcctgcgccc 180
agtctcctcg attccctcgc ctctgagccg ggagagccga acagctgaag agagttcact 240
gactccccag ccccgagtgg gccttgtagc catcatgacc agttttgaag atgctgacac 300
agaagagaca gtaacttgtc tccagatgac ggttttacat cctggccagt tgcagtgtgg 360
aatatttcag tcaataagtt ttaacagaga gaaactccct tccagcgaag tggtgaaatt 420
tggccgaaat tccaacatct gtcattatac ttttcaggac aaacaggttt cccgagttca 480
gttttctctg cagctgttta aaaaattcaa cagctcagtt ctctcctttg aaataaaaaa 540
tatgagtaaa aagaccaatc tgatcgtaga cagcagagag ctgggctacc taaataaaat 600
ggacctgcc aacaggtgca tggtagatt cggagagtag cagtttctga tggagaagga 660
agatggcgag tcattggaat tttttgagac tcaatttatt ttatctccaa gatcactctt 720
gcaagaaaac aactggccac cacacaggcc cataccggag tatggcactt actcgctctg 780
ctctcccaa agcagttctc cgacagaaat ggatgaaaat gagtcaatga cacagaaagt 840
ctaagaggag aaatatgatg gatgaagagc tctgtagatg ctgtatagac actaaataag 900
agttgattag ggtagtatat tatagtcata tgttatgctg tgaaatttgg aattcartat 960
tatcattttg aagtctgtaa attgtgttag tcattaactt agtcacctgt tgtattctgg 1020
atctacacaa aattatttta actgctctta ttaactctgt aggattaata tacaaaaagt 1080
atcctttgag atgaagtcgt gttctcaaaa taaggttata ttattttctt tttctgcttg 1140
attttcatct tgtgttttgc tttgtttttg taaggaaacca tctcttggtt tggtcacatc 1200
agttcacac agccatttgt tttcaaggtc aaggctccag gcaggttggt actggtgttt 1260
gcagctgtc agtacttgca gtactggaat aggttctagg ctagtgtctg cgcgtcactg 1320
tggttttagc atgggaggac ttatttgaga aatactacct tacttttcta tgatttcttt 1380
ttacagagtt atagtgtgtt tactcctaag atgacagttc tctttgtcta tattcagcat 1440
ctaagacaaa tatttaaaaca ttttaaaaga cactgtgttt aagtttagga ttatttactt 1500
accaaattag aagtttgact tttatgtgtt atacacaatc ttaaaatttc acgaattcac 1560
ctttttaata gtatccatgt acataataaa atcaaagttt aattagcnaa aaaaaaaaaa 1620
aaaaaaaaaa aaaaaaaaaa aa 1642

```

<210> 453

<211> 2254

<212> DNA

<213> Homo sapiens

<400> 453

```

gggagcagct ctgtcgtcac acacgcctct tctacatggt tcgggcacag gctggagcag 60
gacatgcaga ggaccgcaga gcctcctgca cctragttct agactcaacg gtgctctgcg 120
ccaggagcag aattttsctg accgcttcct ccctgaatga cgaggctgcc caagctctgg 180
gcaagacctg ctgggaaggc cctggtcagc cccgtggtgc agaacatcac ctcccttgat 240
gaggatggca ttagccccct ggggttggtg ctggaccagt acctggagtg tcaggaaagt 300
gtcttcaacc ccagagccg cggcccagct ttcttctcgc gggtcgcccg tctcactcac 360
ctgctgggtg atgtcgagcc ctgtgaggca cccctcctg tggtagccac tcctcgcccc 420
aaaggcagaa acagaagcca cgactggagc tccttggtta cccggggcct tccaagcagc 480
atcatgagaa acctgacgcg ctgttgccgg gccgtggtgg agaagcaggt gaacaatttt 540
ytgacctcat cctggcggga tgatgacttt gtgccacgct actgtragca ctttaattatt 600
ctgcagaact caagctctga actgtttggg cctcgggyag ccttcttgct ggcgctgcaa 660
aatggctgtg cgggagcctt gctgaagctc cttttctca aagctgcccc cgtgagttag 720
cagttcgccc ggcacattga ccagcagatc cagggcagcc ggatcggtgg agcccaggaa 780
atggagaggc tggcacagct gcagcaatgc ctgcaagctg tcctgatttt ctccggcttg 840
gagatagcca ccacttttga gcattattac cagcactaca tggcggaccg tctcctgggc 900
gtggtctcga gctggctgga gggggccgtg ctggagcaga tcgggtccctg cttccccaac 960

```

```

cgcctcccc agcagatggt gcagagcctg agcacctcta aggagctgca gcgccagttc 1020
cacgtctacc agctccagca gctggatcag gaactcctga agctggagga tacagagaag 1080
aaaatacagg tgggccttgg ggccagtggc aaggagcaca agagcgagaa ggaagaggaa 1140
gctggggcag cagcagtggg ggatgtggcg gaggagagag aggaagagga ggagaatgag 1200
gacctctact atgaaggggg aatgccagaa gtgtctgtgc ttgtcctgtc ccgacactcc 1260
tggcctgttg cctcaatctg ccacacactg aaccccagaa cctgcctgcc ctctacctg 1320
aggggcactt tgaacagata ctccaacttc tacaacaaga gtcagagcca ccctgccctt 1380
gagcgaggct cacagaggcg actgcagtgg acgtggctgg gctgggctga gctgcagttt 1440
gggaaccaga ccctgcatgt gtccaccgtg cagatgtggc tactgctgta tctcaacgac 1500
ctgaaggcgg tctctgtgga gagtctgtcg gcgttctcag ggctctccgc agacatgctc 1560
aatcaggcga ttgggcccc cactcttca agaggcccc tggacctca cgagcaaaag 1620
gatataccag gaggggtcct caagattcga gatggcagca aggaaccag gtcgagatgg 1680
gacattgtgc ggctcatccc acctcagacg tacctgcaag ctgagggtga agacggccag 1740
aacttgga gaagacggaa tcttctgaac tgctctatcg tccgaatcct caaggcccat 1800
ggagatgagg ggctgcacat tgaccagctt gtctgtctgg tgctggaggc ttggcagaag 1860
ggcccggtgc ctcccagggg tttggtcagc agccttggtg aggggtctgc atgcagcagc 1920
actgacgtcc tctcctgcat cctacacctc ctgggcaagg gcacgtgag acgcatgac 1980
gaccggcccc aggtgctgtc ctatgcagtc cctgtgactg tcatggagcc tcacactgag 2040
tccctgaacc caggctcctc agggcccaac ccacctca cctccatac cctacagatt 2100
cgctcccggg gtgtgcceta tgccctctgc actgccacc agagcttctc tacttccggg 2160
agccctagac ttggggctcag ggggaaggtag agctggagct ttacagaaa taaaacccaa 2220
gagtttgatt ataaaaaaaa aaaaaaaaaa aaaa 2254

```

<210> 454

<211> 1931

<212> DNA

<213> Homo sapiens

<400> 454

```

ggcacgaggg aaggagcaag agtgggaggg gcgcgcggag gccgcgacgg acgcaagatg 60
gcgacggcga ccatagctct ccaggtcaat ggccagcaag gaggggggtc cgagccggcg 120
gcggcgggcg cagtgggtggc agcgggagac aaatggaaac ctccacaggg cacagactcc 180
atcaagatgg agaacgggca gagcacagcc gccaaagtgg ggctgcctcc cctgacgccc 240
gagcagcagg aggcccttca gaaggccaag aagtacgccà tggagcagag catcaagagt 300
gtgctggtga agcagaccat cgcgcaccag cagcagcagc tcaccaacct gcagatggca 360
gcagtgacaa tgggctttgg agatcctctc tcacctttgc aatcgatggc ggctcagcgg 420
cagcggggcg tggccatcat gtgccgcgtc tacgtgggct ctatctacta tgagctgggg 480
gaggacacca tccgccaggc ctttgcccc tttggcccca tcaagagcat cgacatgtcc 540
tgggactccg tcaccatgaa gcacaagggc tttgccttcg tggagtatga ggtccccgaa 600
gctgcacagc tggccttgga gcagatgaac tcggtgatgc tggggggcag gaacatcaag 660
gtgggcagac ccagcaacat agggcaggcc cagcccatca tagaccagtt ggctgaggag 720
gcacgggcct tcaaccgcat ctacgtggcc tctgtgcacc aggacctctc agacgatgac 780
atcaagagcg tgtttgaggc ctttgccaag atcaagtcct gcacactggc ccgggacccc 840
acaactggca agcacaaggg ctacggcttc attgagtacg agaaggccca gtcgtcccaa 900
gatgctgtgt cttccatgaa cctctttgac ctgggtggcc agtacttgcg ggtgggcaag 960
gctgtcacac cgcccatgcc ctaactcaca ccagccacgc ctggaggcct cccacctgcc 1020
gctgtgtgtg cagctgtgtc agccactgcc aagatcacag ctcagggaagc agtggccgga 1080
gcagcgggtg tgggtaccct gggcacacct ggactggtgt cccagcact gacctggcc 1140
cagccccctg gcactttgcc ccaggctgtc atggctgccc aggcacctgg agtcacaca 1200
ggtgtgacct cagcccgctc tcctatcccc gtcaccatcc cctcggtggg agtgggtgaa 1260
cccactctgg ccagccctcc aacgctgggt ctcctggagc ccaagaagga gaaggaagaa 1320

```



```
gaggagctgt ttccccgagtc agagcggcca gagatgctga gcgagcagga gcacatgagc 1380
atctcgggca gtagcgcccc acacatgggtg atgcagaagc tgctccgcaa gcaggagtct 1440
acagtgatgg ttctgcgcaa catgggtggac cccaaggaca tcgatgatga cctggaaggg 1500
gaggtgacag aggagtgtgg caagttcggg gccgtgaacc gcgtcatcat ctaccaagag 1560
aaacaaggcg aggaggagga tgcagaaatc attgtcaaga tctttgtgga gttttccata 1620
gcctctgaga ctcataaggc catccaggcc ctcaatggcc gctggtttgc tggccgcaag 1680
gtggtggctg aagtgtacga ccaggagcgt ttgataaca gtgacctctc tgcgtgacag 1740
tggtccctct ccccggaact gcacttggtc cttgtttcct ctgggtttta tagtgataca 1800
gtggtgtccc cggggccagg cgcgctctgc ccagcccagc ctacagtgcg gataaagggtg 1860
cggatgctgc tggccctgaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1920
aaaaaaaaaa a                                     1931
```

<210> 455

<211> 771

<212> DNA

<213> Homo sapiens

<400> 455

```
ggccacgagg tacgtcccg cgctccgctt ggcccaagat ggcgccctcc gtgtgcagcg 60
ggttgctggg gccacgggtg ctgtcctgga gccgagagct gccttgcgct tggcgcgccc 120
tgcacacctc cccggtctgc gccagaacc gggcggcccg agtacgcgta agcaaggggg 180
acaagccggt gacctacgag gaggcacacg cgccgcacta catcgcccac cgtaaaggct 240
ggctgtcgct gcacacaggt aacctggatg gagaggacca tgccgcagag cgaacgggtg 300
aggatgtttt ccttcgcaag ttcattgtgg gtaccttccc aggtgcctg gctgaccagc 360
tggtttttaa gcgcgggggt aaccagttgg agatctgtgc cgtggtcctg aggcagttgt 420
ctccacacaa gtactacttc ctctgtgggt acagtgaac tttgctgtcc tacttttaca 480
aatgtcctgt gcgactccac ctccaaactg tgccctcaaa ggttgtgtat aagtacctct 540
agaacaatcc ctttttttcc atcaagctgt agcctgcaga gaatggaaac gtgggaaagg 600
aatggatatg gggggaaatg catccctca gaggactgag gcatagtctc tcatctgcta 660
ttgaataaag accttctatc ttgaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 720
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaagggggg g                                     771
```

<210> 456

<211> 1169

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1164)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1167)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1169)

<223> n equals a,t,g, or c

<400> 456

```

aattcggcac gagctctctc tctctctctc tctctctctc tctctgctta gggttttcag 60
gaaatttgga agctgccgca gtagttggag tctaaggact cgtgacaatc ttcgggtgcc 120
cttcgagaga aaaggggagg atgccactgg agtcatcctc ttcaatgcca ctatccttcc 180
catctctctt accctcagta ccacacaata ctaacccttc cctcctctg atgtcttaca 240
tcacctccca ggagatgaag tgtattcttc actggtttgc caattgggtca ggtccccagc 300
gtgaacgttt cctagaggac ctggtagcta aggcagtgcc agaaaaatta caaccactgc 360
tggaatgtct ggagcagctt agtgtgtctg gggcagaccg accaccttct atctttgagt 420
gccagctaca tctttgggat cagtggtttc gaggtggtgc tgagcaggag cgcaatgaat 480
ttgtcagaca gctggagtgc agtgagccag acttcgtggc aaagttttac caagcagtgg 540
ctgctacagc tggttaaggac tgataggcat tcagaccaa gaagataacc atagctgatg 600
gagccatgac tctctacaat gataactcaa ttcaaagtgc tcgcctaaag ctctggaact 660
ggatttccaa ccagctgacc gaactcactg accagtacag gcatggttat ttcaacatta 720
atagcatgtc aactggactc ctatttgtaa atgttatcaa tctaagcaat ccagctcatc 780
agtctactag tttgcttctt tccgagagat gtcaagtcct caagaatttg atggcttctt 840
ctgcagctat aaccacaagg aacctacaca ttgtaactca agtccactgc tggctcatga 900
aatgtgtaaa gtagaacctt ccttcccag agtaagaca ggacaataaa aggtggcggt 960
tttgtacttt acctggattc cattggctgg ttttaccact cctatcagat tgtagtgtaa 1020
tttgtgtgata cgcaaaccat tagtttwccc agtgatgatt taataaaatt atgaaaaatc 1080
aggagaggga gataattagt tgcttctctc ttcacactgt ttgaatcgaa aaaaaaaaaa 1140
aaaaaaaaaa aaaaaaaaaa aaanaanan                                     1169

```

<210> 457

<211> 3249

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (3234)

<223> n equals a,t,g, or c

<400> 457

```

gcgcggcccg gccggggcag ccgggaagcg ggtgggggtg tgtgttacc agtagctcct 60
gggacatcgc tcgggtacgc tccacgccgt cgcagccact gctgtggtcg ccggtcggcc 120
gaggggccgc gatactgggt gcccgcggtg taagcagaat tcgacgtgta tcgctgccgt 180
caagatggag gggcctttgt ccgtgttcg tgaccgcagc actggggaaa cgatccgctc 240
ccaaaacgtt atggctgcag cttcgattgc caatattgta aaaagtctc ttggtccagt 300
tggtctggat aaaatgttgg tggatgatat tggatgatga accattacta acgatgggtc 360
aaccatcctg aagttactgg aggtagaaca tcctgcagct aaagtcttct gtgagctggc 420
tgatctgcaa gacaaagaag ttggagatgg aactacttca gtggttatta ttgcagcaga 480
actcctaaaa aatgcagatg aattagtcaa acagaaaatt catcccatat cagttattag 540
tggtctatcga cttgcttgca aggcaagcag tgcgttatat caatgaaaac ctaattgtta 600
acacagatga actgggaaga gattgcctga ttaatgtgc taagacatcc atgtcttcca 660
aaatcattgg aataaatggg gatttcttgc ctaactgggt agtagatgct gtacttgcta 720
ttaaatacac agacataaga ggccagccag gctatccagt caactctgtt aatattttga 780
aagcccatgg gagaagtcaa atggagagta tgctcatcag tggctatgca ctcaactgtg 840
tggtgggata ccagggcagt cccaagagaa tcgtaaatgc aaaaattgct tgccttgact 900
tcagcctgca aaaaacaaaa atgaagcttg gtgtacaggt ggtcattaca gaccctgaaa 960
aactggacca aattagacag agagaatcag atatcaccaa ggagagaatt cagaagatcc 1020

```

tggcaactgg tgccaatgtt attctaacca ctggtggaat tgatgatatg tgtctgaagt 1080
atthttgtgga ggctgggtgct atggcagtta gaagagtttt aaaaaggac cttaaacgca 1140
ttgccaaagc ttctggagca actattctgt caaccctggc caatttgga ggtgaagaaa 1200
cttttgaagc tgcaatgttg ggacaggcag aagaagtgg acaggagaga atthtggatg 1260
atgagctgat cttaatcaaa aatactaagg ctctgacgtc tgcatcgatt atcttacgtg 1320
gggcaaatga tttcatgtgt gatgagatgg agcgctcttt acatgatgca ctttgtgtag 1380
tgaagagagt tttggagtca aaatctgtgg ttcccgggtg ggggtgctgta gaagcagccc 1440
tttccatata ccttgaaaac tatgcaacca gcatgggggtc tcgggaacag cttgcgattg 1500
cagagtttgc aagatcactt cttgttattc ccaatacact agcagttaat gctgcccagg 1560
actccacaga tctgggtgca aaattaagag cttttcataa tgaggcccag gtaaacccag 1620
aacgtaaaaa tctaaaatgg attggtcttg atthtgagcaa tggtaaacct cgagacaaca 1680
aacaagcagg ggtgtttgaa ccaaccatag ttaaagttaa gaggttgaaa tttgcaacag 1740
aagctgcaat caccattctt cgaattgatg atcttattaa attacatcca gaaagtaag 1800
atgataaaca tggaagtatt gaagatgctg ttcactctgg agcccttaat gattgatctg 1860
atgttccttt tatttataac aatgttaaat gcaattgtct tgtacctga gttgagtatt 1920
acacattaaa gttaaagtaca agctgtaaac ttgggttttt gtgatgtagg aaatggtttc 1980
catctgtact ttggtcctct gatttcacat attgcaacct agtactttat tagtttaaaa 2040
agaaattgag gttgttcaaa gttaagcaa ttcattctct ctgaacacac attgctattc 2100
ccatcccacc cccaatgcac agggctgcaa caccacgact tctgccatt ctctccagt 2160
tgtgtcaacg ggtcacaaga attcgacagc cagatgctcc aagagggtgg cccaaggcta 2220
tagccctcc ttcaatattg accttctctg ggtttaatcc aagttcttta actattgcag 2280
cagagacagc tgcaaaaggct tcattgattt caaatatgtc aacatcttcc agtgaccaac 2340
ctgcttttgt aacagcttgc tttatggctg gaattggctc tattccata atggaaggct 2400
ccacacccac ttgggaccag gaaactatcc gtgctaaagg tgtaagcca cgtttatcag 2460
cttctgactt cttcataaga acgacagctg cagcaccatc atthattcct gaagcattgg 2520
ctggggtgac tgttcccggt ccatcagtaa gaaagtaagg ctttagcttg gacatggctt 2580
ctatgttgct cccatggcga ggaaactcat ctgttttaac ttcaataaga cctcttctag 2640
ttgacaccaa aactggtaca atctctttgt caaaatggcc agctttctgt gcattctctg 2700
tcctgttctg ggacagaact gcaaccttgt cctgatcttc tctactcact tgccattttt 2760
tggtacatt ttcagctgta ataccatata gacagttgtg aaatgcatct gtaagaccat 2820
cacagagtat actgtcagtc agtggcatct cactatctt tactcctgtt ctcaagtaag 2880
ccaagtgagg agccttgtc atattttcca tgctctctgc aaccacaatg ctggagtctc 2940
ctatccctat tgactggact gcaaggcaca cagcttttag gcctgacca cagatcatct 3000
ggcagctcca tgctggaaca gagtagggaa ttctgcacc cactctggct tgtctaacag 3060
gattctgccc acagcctgt gccaagacat gtccaaagat gacctcagac acatcttccg 3120
gagccacagt ggccctctc aagacttctt tgatgacagt ggagcccagg tcctggacag 3180
gaacagcagc taaggcacca ttgaaggaac ctgctggtct gagcaaagg caanggtggg 3240
tccacaact 3249

<210> 458

<211> 1916

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1895)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (1902)

<223> n equals a,t,g, or c

<400> 458

```

gccacggcac gcagccagca agttgttttt aaatgttaat atagaaaaca gtgaaggatt 60
agctgaaaaat atatgagcag gtgacattga ggtttactga aatagccaat ttgactgggtg 120
cttagactat tgtgcagtaa acctaaaagg tagtggagaa ttgcttcctg ctagcaggaa 180
gccttcatct tcttgagtac ccaaaccagg cttcagggtgt cctttgagga tagccagggt 240
tgaaattttt agtttctcag gaagagctct tctatgtggc aggggctgat agggcaaaat 300
aaaatgacaa tttctttatt gctacagagt atcctctata agttattaaa cgagtgtaat 360
ggtataatgc ccttccatca cacaacagga caccacccca gttttgtttt ctgggtttct 420
tccccctttg taggaatcag ataccttttg tagaaaaaaa tggcttatgc cacgtaaagg 480
tgaattttta gaaaccacct tctaggcgtt tttggaaccc ttactgaaat ccctcccctt 540
gttacagatg gcgtagaagt cacaagtctg ttaattggac tgttgcttct ttgcctgttc 600
ctgctttctc tttctgtctg gatagtcagg aaaagattta atgtttaata tttaaacaaa 660
atattttaatg tctatacagt aaaattattc aaacttcaaa ccagtattga aagcagttgg 720
aaaccagcta atagtttctt aatctcagat ttcgagatga atgtaaaactg tattcttttg 780
aaatgtgcaa gtgtttgatt catgccattt gataaacttc tgccttgtag tcattgtttg 840
atgggaccaa cttgtaaagt atgagcctta aataaatctc catgctgaaa aatgtgttct 900
aatgcaacac aaaaacatga agtgactgcc cagaggtaga gttagtgttt aggtggaaa 960
ggagatgaca gctttccaaa gaaggacctt aaacacacca agattgtctt ctacaggaat 1020
tgctgggcag gtctccgact aaaggctctt tgatgaaaag gaagaaaca gcccacaaca 1080
caaggctctg atactactgg taaatgtagg agagaattaa gaatctgtta attaaaatcc 1140
aaacagagct tatttcagta gtcaagttac ctgacatgat aattatttct gcaggataat 1200
tgatgtttta tgttcttttt tggactttat cttcttgcaa aaatttctac aaaaattgtt 1260
ttcttcatcc ttgtggtgct tattcatctg agccgtctcc acagtcccaa tgcctctgct 1320
ttttgtttta cttttgtagc ataaggtttt tgcctttgct ttgccttaag agttccctag 1380
ggagttacca gggcttttcg ttttgtgtag cttttgcagc atggatcaaa cattggctta 1440
ctgtgctaata gtgtgaagag aaaaaattct ctaaagcagg tgagcttta tgaacaaatg 1500
tgtattttat ctgagtttga gtagggtgcg ttgtggattt tgttttttgg gttttttttt 1560
tttttttgta attatatgaa gaaagtccag ttctcataaa tattgatcac ttaaaaaact 1620
tactctttct tgaagaggta cacatgtaaa atttaggaaa ataactaaag taggggctgg 1680
aaccataaga agaattgtta tcagcacgtt catttattat tttggatttg gaacttggct 1740
ttgtttttca atagtgacaa gaatggttca gttctaggaa tgttctggaa gatgctgtta 1800
attttacttt aaaatgagaa tctgggtgta ctgtatttta tcgttttcaa taaaacttct 1860
taagtgtttt ggaaaaaaa aaaaaaaaaa aattnctgcy gncgcgaagg gaattc 1916

```

<210> 459

<211> 2773

<212> DNA

<213> Homo sapiens

<400> 459

```

ggcagaggac caatcggcc cctagactga gacgttggcg tttgaaatca gccaatggca 60
ggtctacact ggagcttcc ctcgcctcc ttgcctagc ctgcgagtgt tctgagggaa 120
gcaaggaggc ggcggcgcc agcagtggtg gagtagtgga aacgttgctt ctgaggggag 180
cccaagatga ccggttctaa cgagttcaag ctgaaccagc caccgagga tggcatctcc 240
tccgtgaagt tcagcccaa cacctcccag ttctgtctg tctcctcctg ggacacgtcc 300
gtgcgtctct acgatgtgcc ggccaactcc atgcggctca agtaccagca caccggcgcc 360
gtcctggact gcgccttcta cgatccaacg catgcctgga gtggaggact agatcatcaa 420
ttgaaaatgc atgatttgaa cactgatcaa gaaaatcttg ttgggaccca tgatgcccct 480

```

```

atcagatgtg ttgaatactg tccagaagtg aatgtgatgg tcaactggaag ttgggatcag 540
acagttaaac tgtgggatcc cagaactcct tgtaatgctg ggaccttctc tcagcctgaa 600
aaggatatata ccctctcagt gtctggagac cggctgattg tgggaacagc aggccgcaga 660
gtgttggtgt gggacttacg gaacatgggt tacgtgcagc agcgagggga gtccagcctg 720
aaataccaga ctcgctgcat acgagcgttt ccaaacaagc agggttatgt attaagctct 780
attgaaggcc gagtggcagt tgagtatttg gacccaagcc ctgaggtaca gaagaagaag 840
tatgccttca aatgtcacag actaaaagaa aataatattg agcagattta cccagtcaat 900
gccatttctt ttcacaatat ccacaatata tttgccacag gtggttctga tggctttgta 960
aatatttggg atccatttaa caaaaagcga ctgtgccaat tccatcggtg cccacgagc 1020
atcgcatcac ttgccttcag taatgatggg actacgcttg caatagcgtc atcatatatg 1080
tatgaaatgg atgacacaga acatcctgaa gatggtatct tcattcgcca agtgacagat 1140
gcagaaacaa aacccaagtc accatgtact tgacaagatt tcatttactt aagtgccatg 1200
ttgatgataa taaaacaatt cgtactcccc aatggtggat ttattactat taaagaaacc 1260
agggaaaata ttaattttta tattataaca acctgaaaat aatggaaaag aggtttttga 1320
atTTTTTTTT ttaaataaac accttcttaa gtgcatgaga tggtttgatg gtttgctgca 1380
ttaaaggatg ttgggcaaac aaaattggag ggcaagtgc tgcagttttg agaatcagtt 1440
ttgaccttga tgattttttg tttccactgt ggaaataaat gtttgtaaat aagtgtata 1500
aaaatccctt tgcattcttt ctggacctta aatggtagag gaaaaggctc gtgagccatt 1560
gttttctttt gctggttata gttgctaatt ctaaagctgc ttcagactgc ttcattgagg 1620
ggttaatcta caattaaaca atatttcttc ttggccgtcc attattttct gaagcagatg 1680
gttcatcatt tcctgggctg ttaaacaaag cgagggttaag gtttagactc tgggaatcag 1740
ctagttttca atctttattg ggtgcagaag gaaaactaat aagaaaacct cctaatatca 1800
ttttgtgact gtaaacaatt atttattagc aaacaattga tcccagaagg gcaaattggt 1860
tgagtcagta atgagctgag aaaagacaga gcatatctgt gtatttgtaa aaataattgt 1920
aacgtaattg cagtgcattt agacaggcat ctatttggac ctgtttctat ctctaaatga 1980
atTTTTtgaa acattaatga ggtttacata tttctctgac atttatatag ttcttatgtc 2040
catttcagtt gaccagccgc tgggtgattaa agttaaaaag aaaaaaatta tagtgagaat 2100
gagattcatt tcaatgtaat gcactaaagc agaacacgaa cttagcttgg cctattctag 2160
gtagttccaa atagtatttt tgttgtaaaa ctttaaaatt tatattaatt tgcaaatgta 2220
tgtctctgaa gtaggacttg gacctttcct gagatttatt ttatccgtga tgtatttttt 2280
ttaattcttt tgatacagag aagggtcttt ttttttttaa gtatttcagt gaaaacttgg 2340
tgtaagtctg aacccatctt ttgaaatgta ttttcttcat tgcaggtcca cctaatactc 2400
ctgtgaaagt ggtttctcta tggaaagctt tgtttgcttc ctacaaatac atgcttatc 2460
cttaagggat gtgtagagt tactgtggat ttctctgttt tctgtcttac aagaaacttg 2520
tctatgtacc ttaatacttt gtttaggatg aggagtcttt gtgtccctgt acagtagtct 2580
gacgtatttc cccttctgtc ccctagtaag cccagttgct gtatctgaac agtttgagct 2640
ctttttgtaa tatactctaa acctgttatt tctgtgctaa taaacgagat gcagaaccct 2700
tgaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa gsgggccgct 2760
cgcatctag aac 2773

```

<210> 460

<211> 2031

<212> DNA

<213> Homo sapiens

<400> 460

```

cccacgcgtc cgccccacgcg tccgccccacg cgtccggcgc cagcggcctc gccgcccgtc 60
aagctgtcca catccctggc ctcagccccgc cacatcaccc tgacctgctt acgcccagat 120
tttcttcaat cacatctgaa taaatcactt gaagaaagct tatagcttca ttgcaccatg 180
tgtggcattt gggcgctggt tggcagtgat gattgccttt ctgttcagtg tctgagtgtc 240
atgaagattg cacacagagg tccagatgca ttccgttttg agaattgtcaa tggatacacc 300

```

```
aactgctgct ttggatttca ccggttggcg gtagttgacc cgctgtttgg aatgcagcca 360
attcgagtga agaaatatcc gtatttgtgg ctctgttaca atggtgaaat ctacaaccat 420
aagaagatgc aacagcattt tgaatttgaa taccagacca aagtggatgg tgagataatc 480
cttcattctt atgacaaagg aggaattgag caaacaattt gtatgttgga tgggtgtgtt 540
gcatttgttt tactggatac tgccaataag aaagtgttcc tgggtagaga tacatatgga 600
gtcagacctt tgtttaaagc aatgacagaa gatggatttt tggctgtatg ttcagaagct 660
aaaggtcttg ttacattgaa gcaactccgc actccctttt taaaagtgga gccttttctt 720
cctggacact atgaagtttt ggattttaaag ccaaatggca aagttgcatc cgtggaaatg 780
gttaaataatc atcactgtcg ggatgaaccc ctgcacgccc tctatgacaa tgtggagaaa 840
ctctttccag gttttgagat agaaactgtg aagaacaacc tcaggatcct ttttaataat 900
gctgtaaaaga aacgtttgat gacagacaga aggattggct gccttttatc agggggcttg 960
gactccagct tggttgctgc cactctgttg aagcagctga aagaagccca agtacagtat 1020
cctctccaga catttgcaat tggcatggaa gacagccccg atttactggc tgctagaaaag 1080
gtggcagatc atattggaag tgaacattat gaagtccttt ttaactctga ggaaggcatt 1140
caggctctgg atgaagtcac attttccttg gaaacttatg acattacaac agttcgtgct 1200
tcagtaggta tgtatttaat ttccaagtat attcggaga acacagatag cgtggtgatc 1260
ttctctggag aaggatcaga tgaacttacg cagggttaca tatattttca caaggctcct 1320
tctcctgaaa aagccgagga ggagagtga aggcttctga gggaactcta tttgtttgat 1380
gttctccgcg cagatcgaac tactgctgcc catggtcttg aactgagagt ccatttcta 1440
gatcatcgat ttcttcccta ttacttgtct ctgccaccag aaatgagaat tccaaagaat 1500
gggatagaaa aacatctcct gagagagacg tttgaggatt ccaatctgat acccaaagag 1560
attctctggc gaccaaaga agccttcagt gatggaataa cttcagttaa gaattcctgg 1620
tttaagattt tacaggaata cgttgaacat caggttgatg atgcaatgat ggcaaagtga 1680
gcccagaaat ttcccttcaa tactcctaaa accaaagaag gatattacta ccgtcaagtc 1740
tttgaacgcc attaccagc cgggctgac tggctgagcc attactggat gcccaagtgg 1800
atcaatgcc ctgacccttc tgccgcacg ctgaccact acaagtcagc tgtcaaagct 1860
taggtggtct ttatgctgta atgtgaaagc aaatatttct tcgtgttgga tggggactgt 1920
gggtagatag gggaacaatg agagtcaact caggctaact tgggtgtgaa aaaaataaaa 1980
gtcctaatac taaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 2031
```

```
<210> 461
<211> 1839
<212> DNA
<213> Homo sapiens
```

```
<220>
<221> misc feature
<222> (1496)
<223> n equals a,t,g, or c
```

```
<220>
<221> misc feature
<222> (1832)
<223> n equals a,t,g, or c
```

```
<220>
<221> misc feature
<222> (1839)
<223> n equals a,t,g, or c
```

```
<400> 461
```

```
gcgccgcccgt cgtgcgtgcc gctcggcgga ggggacgggc ctgcgttctc tcctccttcc 60
tccccgcctc cagctgccgg caggaccttt ctctcgtgc cgctgggacc ccgtgtcatc 120
gcccgagccg agcacgatgc cccctaataa gggaggtgat ggaattaaac ccccccaat 180
cattggaaga tttggaacct cactgaaaat tggattgtt ggattgcaa atgttgggaa 240
atctactttc ttcaatgtgt taaccaatag tcaggcttca gcagaaaact tcccgttctg 300
cactattgat cctaatagaga gcagagtacc tgtgccagat gaaagggttg actttctttg 360
tcaataccac aaaccagcaa gcaaaattcc tgcctttcta aatgtgggtg atattgctgg 420
ccttgtgaaa ggagctcaca atgggcaggg cctggggaat gcttttttat ctcatattag 480
tgcctgtgat ggcattcttc atctaacacg tgcttttgaa gatgatgata tcacgcacgt 540
tgaaggaaat gtagatccta ttcgagatat agaaataata catgaagagc ttcagcttaa 600
agatgaggaa atgattgggc ccattataga taaactagaa aagggtggctg tgagaggagg 660
agataaaaaa ctaaacctg aatatgatat aatgtgcaa gtaaaatcct gggttataga 720
tcaaaagaaa cctgttcgct tctatcatga ttggaatgac aaagagattg aagtgttgaa 780
taaacactta tttttgactt caaaaccaat ggtctacttg gttaatcttt ctgaaaaaga 840
ctacattaga aagaaaaaca aatggttgat aaaaattaaa gagtgggtgg acaagtatga 900
cccagggtgt ttggtcattc ctttttagtg ggccttgga ctcaagttgc aagaattgag 960
tgctgaggag agacagaagt atctggaagc gaacatgaca caaagtgtct tgccaaagat 1020
cattaaggct gggtttgca cactccaact agaatacttt ttcactgcag gcccgatga 1080
agtgcgtgca tggaccatca ggaaaggac taaggctcct caggctgcag gaaagattca 1140
cacagatttt gaaaaggat tcattatggc tgaagtaatg aaatacgaag attttaaaga 1200
ggaaggttct gaaaatgcag tcaaggctgc tggaaagtac agacaacaag gcagaaatta 1260
tattgttgaa gatggagata ttatcttctt caaatttaac acacctcaac aaccgaagaa 1320
gaaataaaa ttagttattg ctcaagataa catacaactt ccaaaaggca tctgattttt 1380
aaaaaattaa aatttctgaa aaccaatgcg acaataaag ttggggagat gggaatcttt 1440
gacaaacaaa ttatttttat ttgttttaaa attaaaatac tgtgtacccc ccccnccycc 1500
atgaaatgca ggttcactaa atgtgaacag ctttgctttt cacgtgatta agaccctact 1560
ccaaattgta gaagcttttc aggaaccata ttactctcat gatacttcat taatctccat 1620
catgtatgcc aagcctgaca catttgacag tgaggacaat gtggcttgct cctttttgaa 1680
tctacagata atgcatgttt tacagtactc cagatgtcta cactcaataa aacatttgac 1740
aaaacaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1800
aaaaaaaaaa aaaaaaaacc ccgggggggg gnccccaan 1839
```

<210> 462

<211> 779

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (26)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (731)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (737)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (759)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (762)

<223> n equals a,t,g, or c

<400> 462

```
aggcctgatg ggctggagcc agactntggt ctgaggagga gacacagcct tataagctga 60
gggagtggag agggccgggg ccaggaaagc agagacagac aaagcgtagg gagaagaaga 120
gaggcagggg agacaagcca ggcacgatgg ccaccttccc accagcaacc agcgccccc 180
agcagccccc agggccggag gacgaggact ccagcctgga tgaatctgac ctctatagcc 240
tggcccattc ctacctcgga ggtggaggcc ggaaaggctc caccaagaga gaagctgctg 300
ccaacaccaa ccgccccagc cctggcgggc acgagaggaa actggtgacc aagctgcaga 360
attcagagag gaagaagcga ggggcacggc gctgagacag agctggagat gaggccagac 420
catggacact acaccagca atagagacgg gactgcggag gaaggaggac ccaggacagg 480
atccaggccg gcttgccaca cccccaccc ctaggactta ttcccgtga ctgagtctct 540
gaggggctac caggaaagcg cctccaaccc tagcaaaagt gcaagatggg gagtgagagg 600
ctgggaatgg agggcagagc caggaagatc cccagaaaaa gaaagctaca gaagaaactg 660
gggctcctcc aggggtggcag caacaataaa tagacacgca cggarccam aaaaaaaaaa 720
aaaagggsgg nccggancca attggcctaa agggggggnt tncaattaat gggccgggt 779
```

<210> 463

<211> 1717

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (5)

<223> n equals a,t,g, or c

<220>

<221> misc feature

<222> (27)

<223> n equals a,t,g, or c

<400> 463

```
ctagnaactg gtgggtcccc cgggccnngc attatttcgg gcagagtggc aattactccg 60
tgatctttga tgactattac wcataacagc actctagcac cttwtcttac tggcatggac 120
ttcctcatgg actgctactt catggatgat agcttcattg ctttgggtag ggatttaagg 180
tagtcaaggg gaaaatacgc attttattac aggtcttaac atcaggcaac tttcaacttt 240
aaaacccttt gtgaaaaatg tggttatagc actatagctc tgatttttagg atggttaaat 300
gttatattca ttgttggtt accttatcaa actgtgccat taatcctttc acagacatag 360
gtaaggaaga gaacaaccag tggattcagg ggacaattat ctatctccaa ataataggct 420
tttatttctt gcagctaact ttttcagtga ttctagcaga tgccatctag tacatccttg 480
atcttggtts tttcgtgaga gatctcgcca tggcagcatc ttgttaagta agtgtaattg 540
```